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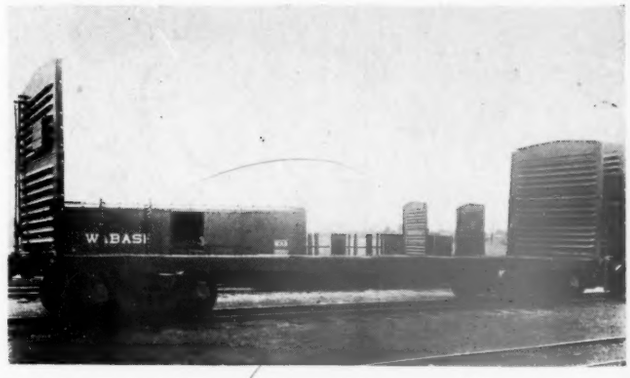

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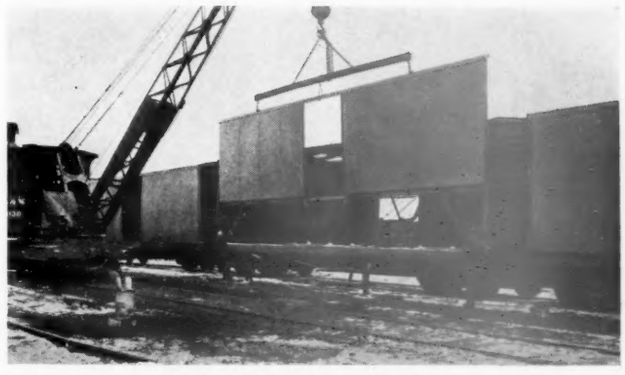

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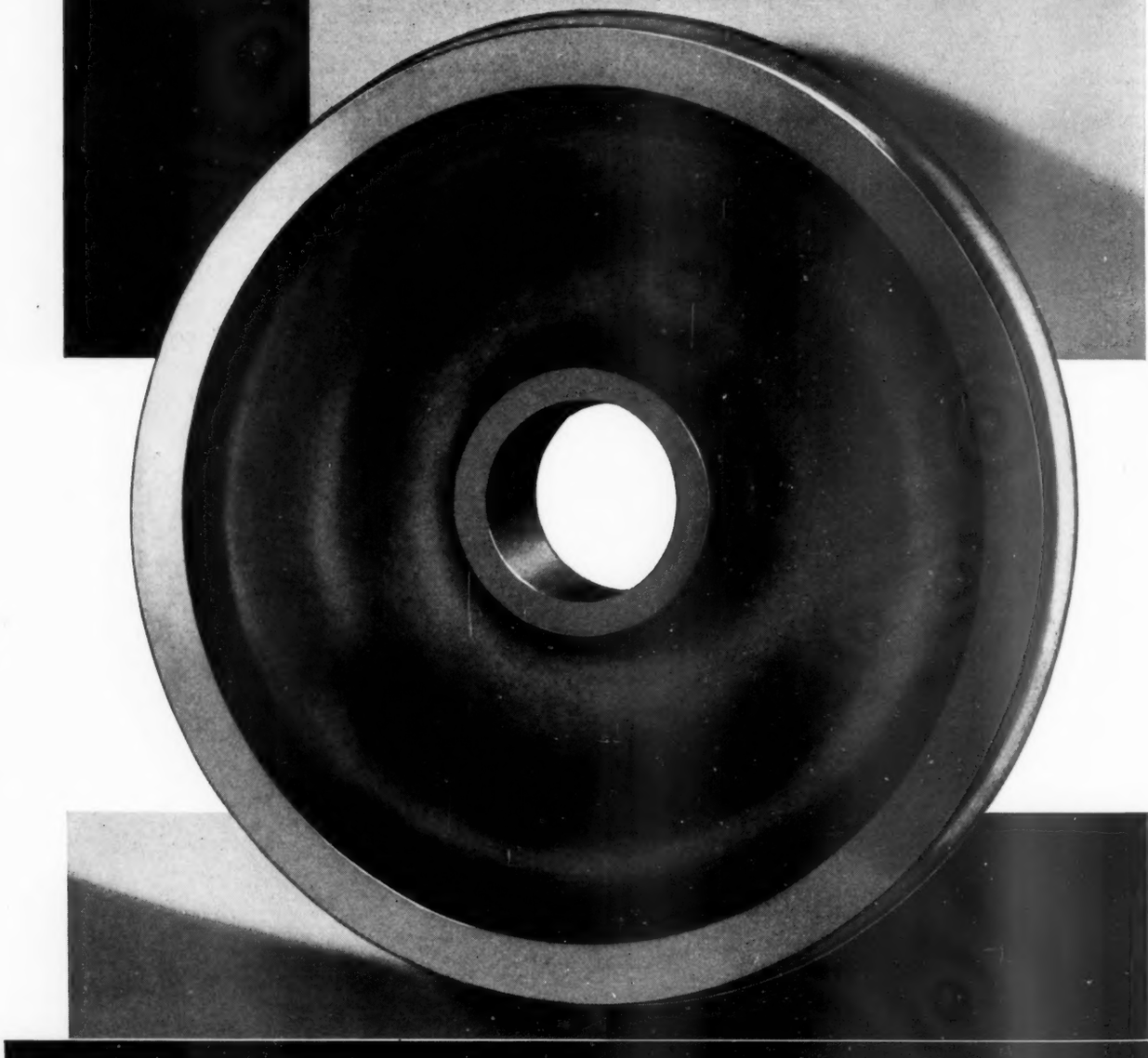

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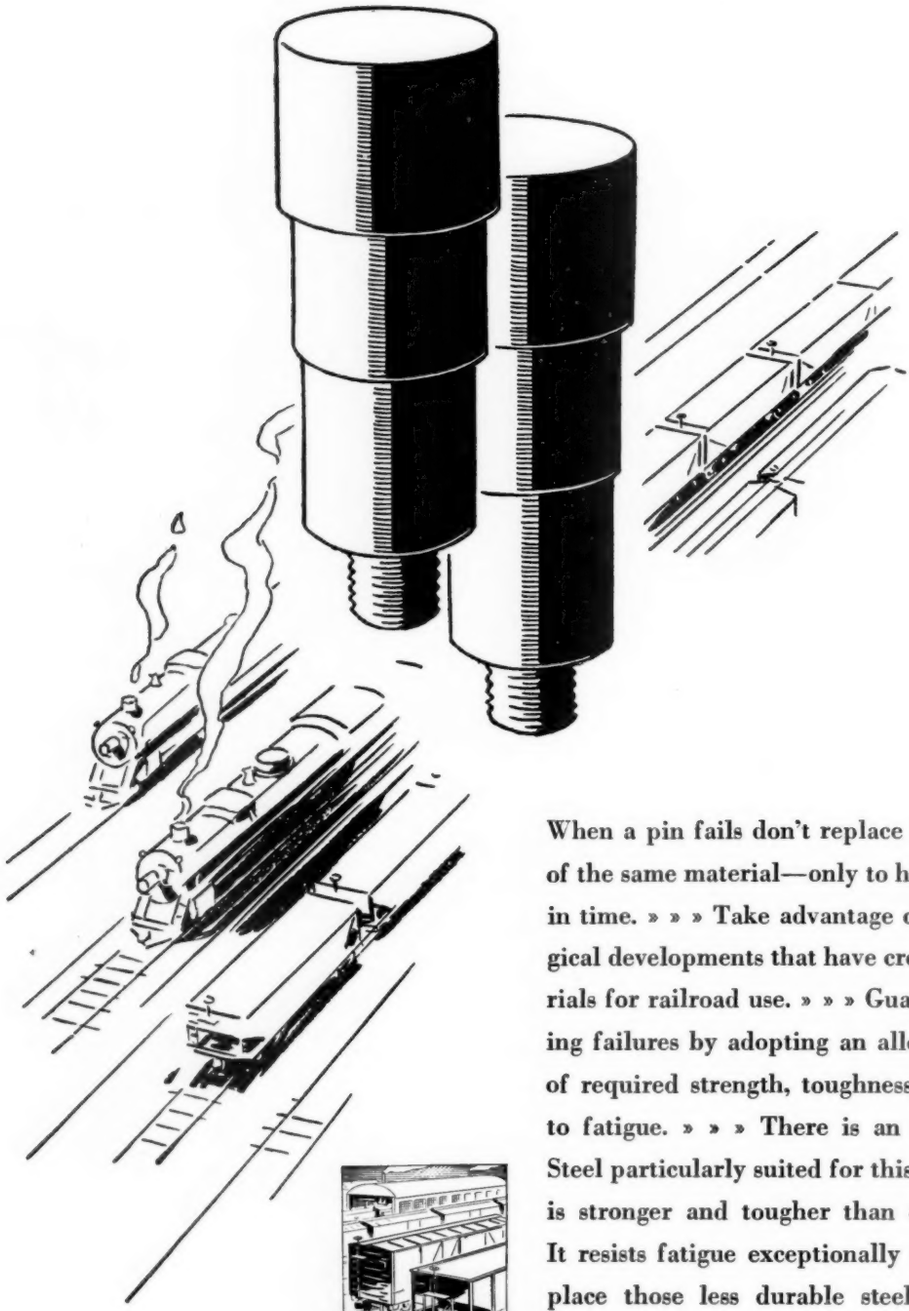

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RAILWAY AGE

Why Business Has Stagnated for Two Years

The Great Depression has now prevailed in the United States almost six years. Throughout this time two kinds of completely opposed policies for government and business have been advocated for terminating it. One of these classes of policies has been derived from the orthodox economics of capitalism. Its advocates have contended that depression is reduced production, especially in the durable goods industries; that for increase of production and recovery reliance should be placed principally upon the natural working of economic forces; and, therefore, they have opposed government interference, such as tinkering with the currency, huge expenditures upon public works and increasing the cost of production by reducing hours of work and advancing hourly wages.

The other class of policies advocated has been derived from socialist-union labor economics. It has been predicated upon the assumption that depression is due principally to, and is characterized principally by, insufficient purchasing power of the wage earning class, and that therefore the way to terminate it is to increase the purchasing power of labor by advancing its wages and by making huge government expenditures upon public works. These government expenditures, it has been contended, will not only give employment during the depression, but will "prime the pump" of business.

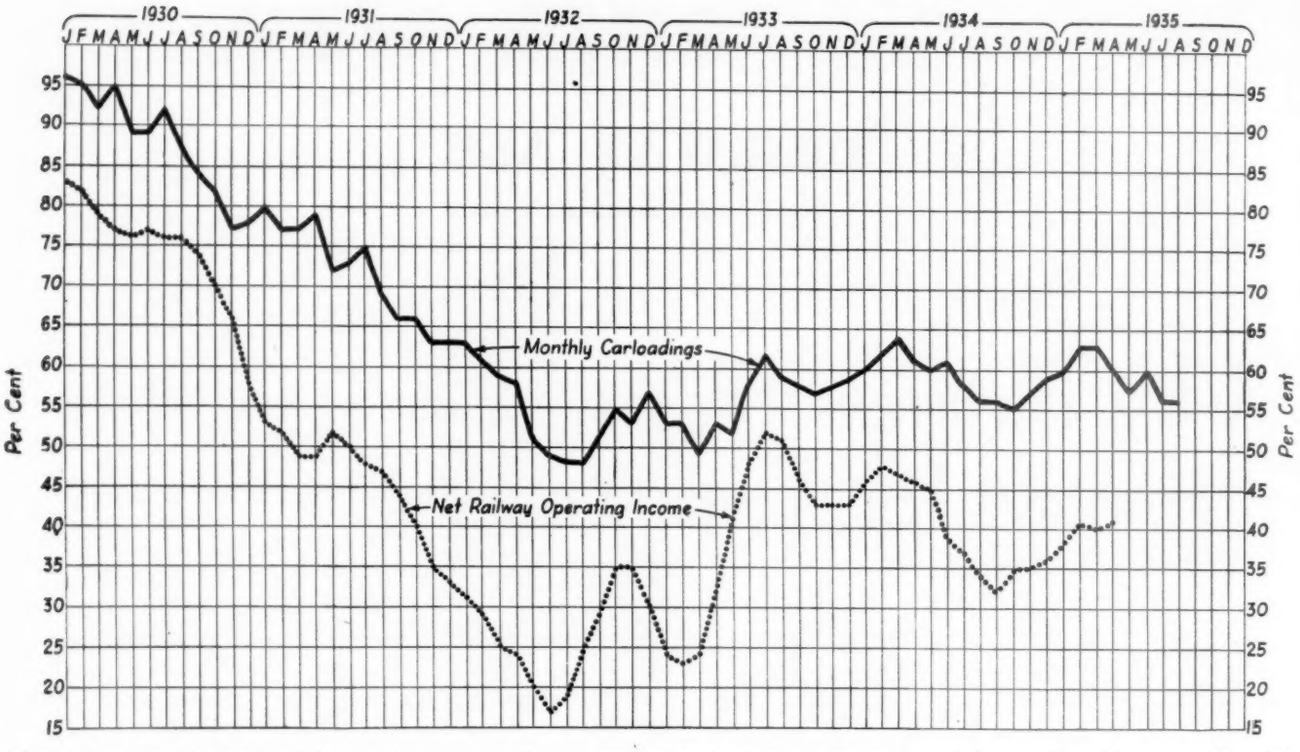
Who Has Been Right About Economic Policies?

From the beginning of the depression the *Railway Age* has advocated the former and opposed the latter class of policies. It must be painful for some business interests and publications that are now criticising the New Deal to recall that long before the New Deal began they were advocating "pump priming" by huge government expenditures and opportunity for industries to co-operate to control production and advance prices. They got with a vengeance both their pump priming and their opportunity for business co-operation by the passage of the National Industrial Recovery Act. But the priming has been costing so much more than they anticipated, and "regimentation" under NRA proved to be so largely in the interest of the labor unions and so expensive as respects costs of production, that many of their former most energetic advocates finally have recognized them as economically unsound and essentially socialistic, and are now among the most embittered critics of the New Deal!

Differences of opinion regarding the desirability of proposed government or business policies are not uncommon. The best test of who was right is the results of the policies actually adopted. The *Railway Age* asserts that the record of the almost six years of depression, and especially since June, 1933, demonstrates that the opponents of every socialist-union labor policy which has been adopted have been right and its advocates wrong. On this record there is no way to restore prosperity excepting by reversing these policies as much as is essential to restoring the effectiveness of the *profit motive* in all business. Increase of useful production is essential, because useful production is the only means of full and useful re-employment and the only source of national wealth and income. Increase of production depends upon restoration of effective operation of the profit motive, because continuance of the depression is due to continued curtailment of production of durable goods, and increase of their production can be caused only by making it actually and prospectively profitable to buy them.

What Is the Actual Two Years' Record?

Let us now look at the actual record. The best single measure of the total volume of all production is railroad car loadings. There is published herewith a chart showing the trend of carloadings, regardless of seasonal variations, throughout the depression years to almost the end of August, 1935. It will repay the most careful study. It shows that production declined with hardly an interruption throughout 1930, 1931 and the first eight months of 1932. Throughout the remainder of 1932 it sharply increased. It declined during the banking crisis in the first quarter of 1933, but im-



Monthly Revenue Carloadings and Net Railway Operating Income, 1930-1935, Expressed as Percentages of Corresponding Months of 1925-1929

(NOTE:—Figures of net railway operating income are charted as five-month moving averages, to portray their trend and to eliminate wide fluctuations from month to month.)

mediately and more sharply increased after the crisis throughout April, May, June and July. Most of the original legislation adopting socialist-union labor "recovery" policies was passed in June. In that month carloadings were relatively 21 per cent larger than at the bottom of the depression in August, 1932. After having further increased in July, they declined until November, increased again until March, 1934, declined again until October, increased again until March, 1935, and declined again until the middle of July.

After this crosswise zigzaging during more than two years of the New Deal where were they? In July, 1935, they were relatively smaller even than in December, 1932, 4½ per cent smaller than in June, 1933, and 11½ per cent smaller than in July, 1933. In the first three weeks of August they were still relatively smaller than in either December, 1932, or June, 1933, and both absolutely and relatively smaller than in either August, 1933, or 1934. The fact that in the first three weeks of August they were still relatively 17 per cent smaller than in June, 1933, shows that recovery actually was farther advanced when the original New Deal legislation was passed than it was more than two years later. Excepting temporarily during the early parts of 1934 and 1935, when it was artificially stimulated by reckless government spending, business as whole never since has been even apparently as good as when all the original "recovery" and "reform" legislation was passed; and it has never since shown as strong and long sustained an upward trend as during the last four months of 1932 and the four months April-July, 1933, immediately following the banking crisis. Its upward trend since the middle of last July undoubtedly has been mainly due to the Supreme Court's decision destroying NRA. If these facts do not demonstrate that the socialist-union labor policies which have prevailed throughout the last two years have not only not promoted recovery, but have arrested the recovery that had begun ten months before their adoption, we are unable to conceive of what facts would be required to prove it.

Effects on Railways and Railway Manufacturing Industry

Of all industries, the railroads and the railway equipment and supply manufacturing industry have been the hardest hit by the effects of these policies. They have hit the railroads both by preventing increase of their traffic and by increasing their operating expenses. The accompanying chart shows how the net operating income earned by the railways has fluctuated with their carloadings. When recovery was beginning in the last one-third of 1932 their net operating income was 20 per cent *larger* than the amount earned in the first two-thirds of that year. It began to "slip" with car loadings in the latter part of 1933, and in the last one-third of that year was 30 per cent *smaller* than in the first two-thirds of that year. During April, May and June, 1935, when general business and car loadings were sliding again, net operating income was smaller than in the second quarter of either 1933 or 1934; and it will be shown, when the figures are available, to have been very much smaller in both July and August than in either 1933 or 1934. Railway employment and buying from manufacturers always and inevitably decline when net operating income declines. To the socialist-union labor policies that have been

followed are mainly attributable the failure of general business to improve during the last two years, and in particular the present condition of the railroad industry and the railway equipment and supply industry.

How Much Has Experience Taught?

The vitally important question is whether, from this actual experience, enough persons will learn that the opponents of these policies were right and their advocates and those responsible for their adoption were wrong. There is much evidence that many have learned it. Most of the business and professional men of the country have learned it. They have been badly injured by these policies, but they have not been the worst injured. The worst injured have been the millions of the working class in whose ostensible interest they have been adopted, but who have had their earnings curtailed by them, or whom they have actually kept out of employment and upon relief. And, unfortunately, there is evidence that labor union leaders and other ostensible friends of the working class have learned nothing from the experience of the last two years.

Consumer goods are bought principally by individuals. Hours of work have been reduced and hourly wages advanced upon the assumption that this would increase employment and the purchasing power of the working class. The evidence is conclusive that these policies have not increased total buying of all goods and, therefore, have not promoted recovery or even increased employment a fraction of what was predicted two years ago. The reason is plain. Most durable goods are bought by industry itself; and the increases in costs of production and curtailment of actual and prospective profits, have prevented revival of production and employment in the durable goods industries. Nevertheless, in their Labor Day addresses labor union leaders and politicians who cater to them advocated further reductions of working hours and advances in hourly wages upon the assumption that those already made have not been sufficient.

The Duty of Business

Business is again struggling upward. It will have four months in which it can show what progress it can make before Congress meets again. Meantime its energies should be devoted to trying to put into effect policies that will stimulate the production of durable goods and to the education of public sentiment regarding the government economic policies which should be abandoned and adopted. No other industry needs an increase of production so much as the railroads. They need it to increase their traffic. They need an increase of the production of railway equipment and supplies as a result of enlargement of their own buying to arrest the deterioration of their own properties. They cannot substantially increase their buying while their net operating income continues as small as at present; and they cannot substantially increase their net operating income in the near future without a reduction of their wages.

No sound economist would dare anticipate how long recovery would be delayed if such government policies as those of the last two years, intensified by more policies such as are advocated by labor union leaders and politicians with a socialist complex, should continue to prevail. Not only in its own interest, but in the interest of every class, and especially of the working class, business must attack them with energy and with every legitimate weapon available.

* * * *

The Atchison, Topeka & Santa Fe's "Grand Canyon Limited" Westbound at Marceline, Mo.

Centralized Traffic Control on C. & O.

Eastward Home Signals at HY

Project at Clifton Forge, Va., replaces one mechanical interlocking and a remote control installation—Main-line train movements expedited

THE Chesapeake & Ohio has installed centralized traffic control on a two-mile section of double-track main line, near Clifton Forge, Va., which includes the switches and crossovers at the entrance to a yard and an outlying main-line crossover about two miles west of the yard entrance. All trains in this territory are directed by signal indication.

A classification yard for eastbound freight cars is located at Clifton Forge, and eastbound freight trains leave the main line two miles west of Clifton Forge to enter the receiving yard. The grade is descending eastbound, and in order to control the speed of trains entering the yard, all trains are brought to a stop before making the diverting movement into the yard.

Prior to the installation of the C. T. C. layout, a mechanical interlocking was maintained at the east end of a center passing siding at Steele, eight miles west of Clifton Forge and about midway between that point and Covington, Steele being the first passing siding and open interlocking plant west of Clifton Forge. All eastward freight trains stop at Covington to turn down air retainers after descending the east slope of the Allegheny mountains, and this delay, together with that experienced in entering Clifton Forge yard, results in trains spending an average of one hour and twenty minutes from the time of arrival at Covington until they cleared the main line at Clifton Forge. Eastward tonnage freight trains which arrived at Covington less than one hour ahead of eastward passenger and other superior trains were, therefore, held at Covington, on account of the fact that the center passing siding at Steele was not long enough to accommodate such trains.

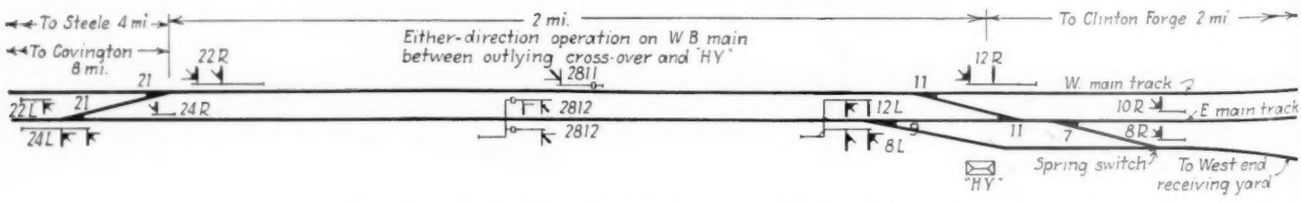
After a study to determine the most economical means of eliminating these delays, it was decided to install a mainline crossover about two miles west of the entrance to the Clifton Forge classification yard, and by a slight rearrangement of the switches and crossovers at the yard entrance, as indicated on the track layout, make provision, through the agency of C. T. C. equipment, for diverting eastward passenger and other superior trains through the new main-line crossover onto the westward main track, and then running them around freight trains occupying the eastward main track while entering the classification yard.

Power-operated switch machines and signals at the west end of the classification yard and the outlying crossover, as well as the signals for directing train movements in either direction on the normal westward main track, are all incorporated in and controlled as a part of the C. T. C. installation. Having provided these new facilities at the entrance of Clifton Forge yard, the passing siding at Steele was no longer essential. Therefore, the 24-lever electro-mechanical interlocking at the east end of Steele center passing siding was removed, as were also the remotely-controlled power switch and signals at the west end of this siding.

The former track layout at the west end of the classification yard consisted of a turnout in the eastward main track and a trailing point No. 10 main-line crossover. The switches were hand-operated by yard switchmen, for while the layout was formerly interlocked, the interlocking was discontinued several years ago.

The main-line crossover was changed to a No. 16 type to permit medium speed for the movement of diverted trains, and the yard lead was extended west to permit the parallel movement of eastward trains into the yard while main-line trains are operating through the crossover from the westward to the eastward main track. In view of the fact that switch 13, at the east end of the crossover between the eastward main track and the yard track, is used for a selection of routes at infrequent intervals, this switch was equipped with a spring mechanism, although electrically-operated power machines were provided for the other four switches.

The signals throughout the C. T. C. territory are of the standard color-light type. All signals for high-speed

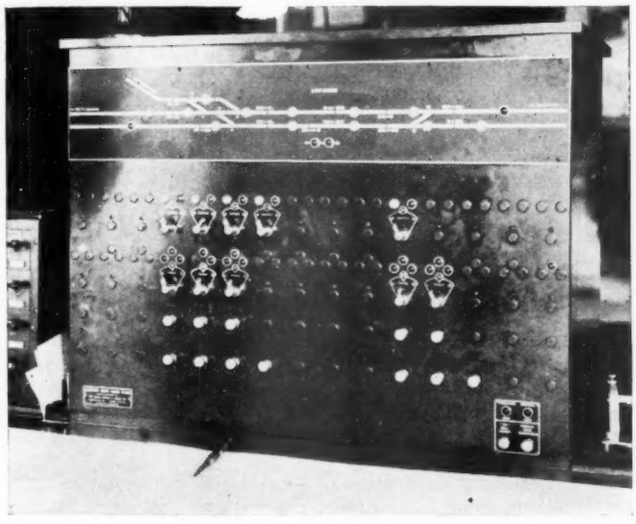


Track and Signal Plan of C.T.C. Territory at Clifton Forge, Va.

main-line operation are mounted on either ground masts or cantilever bridges, so that each signal is located immediately to the right of the track governed. High signals are provided for either-direction operation over the westward track between the west end of the yard and the outlying crossover layout. High signals, governing two or more routes, are provided with a second arm using two aspects. Color-light dwarf signals, with three aspects, are used to control slow-speed reverse movements.

The C. T. C. control machine located in the dispatcher's office at Clifton Forge has five levers for the control of switches, and five levers for the control of signals, each lever being provided with indicating lamps. The time-code system of control is used, all functions being controlled and indications returned by codes transmitted over a single line circuit of two wires.

In the Clifton Forge territory, a telephone is located in each of the instrument houses to be used by the maintainer when it is necessary to communicate with the dispatcher; telephones are also located at each home interlocking signal and at all outlying switches, for the use of



The C.T.C. Machine is in the Dispatcher's Office

trainmen when it is necessary for them to call the dispatcher. These telephones are connected on the station-to-station block telephone line, on which code ringing is employed, and in order to eliminate the objection of having a bell ring in the dispatcher's office for calls for other stations, a means was devised whereby the dispatcher is selected only when desired.

A Western Electric dash-pot relay in the dispatcher's office is adjusted to operate in five seconds. The short and long rings will not permit this relay to complete its operation. However, when a conductor or a maintainer on the Clifton Forge territory wants to call the dispatcher, he turns the crank for about six seconds, which permits the five-second relay to operate, and, through a circuit completed by the dash-pot relay, a lamp on the C. T. C. machine is lighted and stays lighted until the dispatcher inserts a plug in the jack box to connect his telephone to the block line. An answer-back indication to the party doing the ringing is obtained by the feeling of a decided "drag" on the handle of the telephone generator which occurs at the time the dash-pot relay picks up, thus indicating that the dispatcher has been selected, and further ringing is thereby obviated until the dispatcher has had an opportunity to plug in on the block line and answer the call.

This installation was planned and installed by signal forces of the Chesapeake & Ohio.

What Will Co-ordination Save?

THE second report of the Federal Co-ordinator on the economy possibilities of regional co-ordination projects was recently issued. It is on far more of a nation-wide basis than the first report, which confined itself largely to the Chicago terminal situation. The present report covers a great number of terminals throughout the country and is remarkable by reason of the disparity shown between the estimates of savings arrived at by the committees of railway officers, the regional director and the director.

This tendency is noticeable throughout the report and particularly so in the case of 16 important co-ordination projects listed in the accompanying table. In these cases, the regional director added a total of $1,199,590 to the railways' estimates and the director added $8,365,734 more. Thus, according to the Co-ordinator's estimates, carrying out these projects would save $14,600,000, as compared with the carriers' estimate of $5,034,676.

According to the report, 5,015 projects have been or are being studied, the great bulk of which relate to terminal operations. Reports have been made on 4,913 of these projects, while 102 are still pending. The railroads have reported potential economies at $24,688,484. Reports which have been received but not yet approved by the co-ordinating committees show $6,916,655, a total of $31,605,139. The regional staff, as a result of various studies, has augmented the carriers' estimates by $6,122,574. The director has increased them still further by $8,365,734, and regards $10,000,000 as a conservative estimate of the economies possible at Chicago, where a report is still pending. These additions bring the total to $56,093,498. Other surveys yet in process, some of them at comparatively large points, the results of which cannot now be estimated, will increase this total still further.

The report explains the apparent discrepancies as follows:

> The objective which the Co-ordinator had in mind was to discover the opportunities for economy in terminal operations which are physically possible, regardless of the difficulties which might be encountered in realizing these opportunities, owing to the competitive relations of the individual lines. It was thought best to discover the physical possibilities first and deal later with these difficulties, in order that the prizes to be gained, if they were overcome, might be clear and furnish an effective incentive to effort in surmounting the obstacles.
>
> Many of the local survey committees followed this course with much fidelity. Their reports have been comprehensive and they have estimated conservatively the savings attainable under fully co-ordinated arrangements, at the same time keeping in mind the necessity for proper and adequate service to the public and providing therefor.
>
> On the other hand, reports submitted by numerous other committees reflect the disposition of the managements and employees to retain the individual activities of their lines in terminal operations, thus greatly reducing the savings and improvements in service which are obviously possible. It is not practicable, beyond certain limits, to co-ordinate and individualize at the same time. The inclination to resist co-ordination seems to be predicated upon the theory that each line is a private undertaking having nothing but individual responsibilities.
>
> On exclusive local traffic, there is some justification for this theory, although common carrier responsibilities apply even to such traffic. But on through traffic, the movement of which requires more than one line, and which now constitutes 77 per cent of all freight carload traffic, each line forms only a part of the through route and performs only a part of the required carrier service. A single line would hardly seem warranted in retarding the flow and increasing the expense of such through traffic by multiplying yardings, switching and accessorial services in order

to preserve practices and assumed advantages which at best are of questionable value. There is a marked distinction between operating a private company which is engaged in a public calling, and forms only a link in the chain, and operating a factory or store privately owned and doing a wholly individual business.

The effect on co-ordination of Section 7-B of the Emergency Transportation Act is touched upon in the report. Since this is a determining factor in most, if not all, of the co-ordination projects, the remarks of the director and his subordinates, as contained in the report, are given in full below. Co-ordinator Eastman, in his letter of transmittal, states: "The legal rights and welfare of railroad employees must be considered and respected. Conferences and negotiations with them will be necessary."

V. V. Boatner, director of regional operations, in his letter to Mr. Eastman, says: "The labor problem is undoubtedly a serious obstacle to the working out of co-ordination projects. Section 7-B of the Emergency Act is not wholly responsible for this problem, for it existed prior to the Act. Labor has always been a factor. Each line has its own seniority rosters and working conditions which present difficulties and must always give fair and just consideration to its labor obligations. Yet, for reasons which the Co-ordinator has pointed out, this obstacle is not insurmountable. It should yield to negotiations conducted by both sides with realization of the fact that their own welfare is bound up with the welfare of the industry. Competitive transportation forces are now too prevalent and potent to be disregarded. They can only be met by bringing railroad expenses and rates to the lowest reasonable level and raising service at the same time to the highest reasonable level."

In Appendix A, the following is said:

> The labor phase is of great importance and requires negotiation and adjustment. It is not a new problem. It has always been susceptible of treatment between management and employees. The force depletions which will result in many cases constitute only one factor in this perplexing labor problem. Men have definite rights on individual seniority rosters which are of great personal value. These rights and privileges and working arrangements differ among lines. An equitable adjustment in this respect, while formidable, should be possible, if the interests involved approach the problem upon a reasonable plane, fully realizing that many present methods of operation are obsolete under today's demands, both as to time and cost. Under the Emergency Act, Section 7-B has affected the situation, but even here a sympathetic understanding and approach to the problem by management and employees will, we believe, lead to reasonable adjustment. If employment is to be constant and permanent, it must be upon a sound basis of productive yield at reasonable cost.

In connection with the methods to be employed, the report states:

> The most logical and completely effective way to co-ordinate extensive terminal operations would be to create a separate corporation, controlled by the interested lines, to take over the ownership of all property and facilities affected and render a complete service for all interests in the prescribed terminal area.
>
> There are, however, complications in such procedure, by reason of mortgage restrictions, leases, contracts, traffic advantages, property not required for collective use and special operations such as general shops, suburban service, etc., which may best be left to the owning lines. It would require an indefinite time to resolve these difficulties and work out all details, and might involve certain capital expenditures in the acquisition of properties. The same general results can be obtained, with far less confusion and delay, by the establishment of a terminal association in which each line will participate on relatively equal terms. Such an association could take over, under reasonable leasing arrangements, all facilities required in the area to render adequate service for all interests, and operate as a joint agency for all the railroads in the area, expanding and contracting as circumstances might make expedient. In fact, such arrangements are practicable without actual leasing of property, under contracts for the pooling of operations, as has been demonstrated in actual practice at Los Angeles, Houston and other places.
>
> Districts wholly served by a single carrier operation, involving no duplication in service and facilities and no unnecessary expense, could, where desirable, be excluded from the arrangement. In such instances, provision should be made, however, so that the co-ordinated terminal management would have sufficient authority over the independent operation to insure that it will blend effectively and economically with the unified terminal operations.

Conclusions

1. Where susceptible to co-ordination, present unit-operation of facilities in large terminal areas is obsolete, a relic of rail monopoly in transportation and a half measure between transferring freight by hand from one line to another, which was done in the Eighties and Nineties to preserve individuality, and modern methods that should join through routes and movements in an effective and efficient national transportation system.

2. Co-ordination of terminals and facilities is, in general, practical and will result in large savings and improved service.

3. Savings can be greatly augmented, both in line and terminal operation, by co-ordinating and controlling the flow of traffic into and between terminals. Such economies can be secured by trackage agreements or by reasonable pooling arrangements for moving the traffic.

4. Unnecessary duplication of service and facilities exists and continues, requiring large capital expenditures and depleting railroad revenues.

5. It is desirable to have major terminal areas owned and independently operated under joint control of interested lines. Property holdings, rights and privileges, mortgages, contracts, special and wholly individual operation and other serious obstacles render the blending together of such an arrangement involved and difficult and subject to much delay and controversy. However, terminal railroad associations can be established as co-operative organizations and it is reasonable and practicable to commit property to such associations under lease, effecting arrangments that will enable operations of service and facilities the same as if properties were purchased or owned. It is equally practicable to delegate jointly all operations of service and facilities, either as a whole or to a limited extent, to such an association without lease or any definite commitment or transfer of property, by the use of pooling contracts. Such formation of a co-operative operating association can effect, not all, but the major portion of savings practical of attainment under co-ordination.

To such association can be transferred such portion of the personnel required, with right of jurisdiction, if necessary, over all. Property use and loss of any advantageous position that might result can be compensated from savings in due proportion; operations, where wholly of an individual nature, can be excluded. Individual service in train yards, transfer operations, freight houses, team tracks, etc., is of questionable value in promoting good-will and securing patronage. Such advantages have been impaired and are in process of complete nullification by the carriers themselves, through their use of trucks, and by reason of the traffic which moves exclusively by trucks.

The report and its appendices contain a number of completed detailed studies of various terminal and other co-ordination projects throughout the country.

Table of Estimated Savings

	Carriers	Regional Director	Director
New Orleans	$378,951	$.....	$700,000
Louisville	.....	482,189	500,000
Memphis	281,619	435,715	700,000
Chattanooga	104,777	203,916	425,000
Richmond	.....	.....	250,000
Savannah	.....	80,788	.....
Charleston	.....	101,285	400,000
Jacksonville	113,900	259,085	450,000
Atlanta	361,675	.....	750,000
Birmingham	446,680	.....	750,000
Indianapolis	269,328	406,296	550,000
Toledo	42,139	.....	1,000,000
Detroit	657,853	.....	2,000,000
Toledo-Detroit Jt. Trk.	115,932	.....	450,000
New York	1,836,644	.....	5,000,000
Los Angeles	425,178	.....	675,000
	$5,034,676		$14,600,000

North Shore Reduces Truck Nosing*

Tests of high-speed interurban cars show improved riding qualities with cylindrical-tread wheels

By H. A. Otis
Engineer of Car Equipment, Chicago, North Shore & Milwaukee

DURING the past year, the Chicago, North Shore & Milwaukee has conducted an extensive study of truck nosing on its interurban cars for the purpose of determining the cause and possible means of correction. The tests have shown such definite results in favor of cylindrical wheel treads that this contour has been made standard.

In making the tests, one of the standard passenger cars was selected from those in service and was used throughout in the investigations. The car selected was one with large-diameter wheels, with the flanges and treads partly worn. The remainder of the wearing parts were in a condition approximating the average of the rest of the cars in service. Originally the tread and flange had been turned to the standard A. A. R. contour.

A section of track was selected which had a crossover at each end, and was used for all of the tests. This track was built with rails weighing 100 lb. per yd., laid on a stone-ballasted roadbed. It was in good condition and in good gage. For a considerable distance at each end, the test track was tangent and practically level.

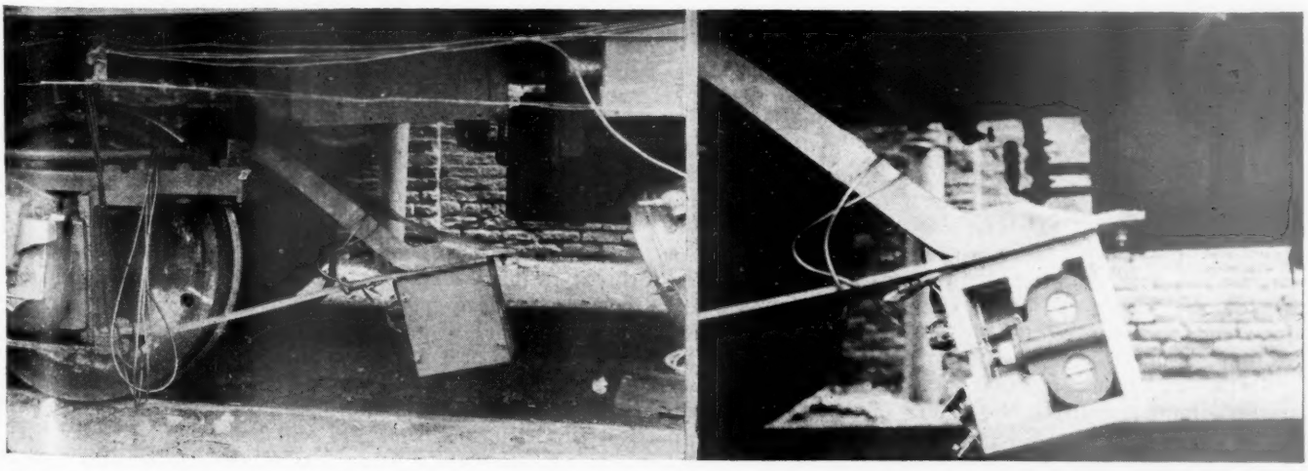
In order to be able to study the relative motions of the wheel with respect to the running rail while the car was running at high speeds permanent records were made with a slow-motion moving picture camera, which was mounted on the inside corner of the truck frame, as shown in the illustrations. This camera was adjusted to make 128 exposures per second, which is eight times as fast as the ordinary motion picture camera. Conversely, when the pictures were shown on the screen with the ordinary projector the movements of the wheel were viewed at one-eighth of their actual speed, permitting a careful study of the action.

For protection the camera was mounted inside a wooden box with a small glass front directly ahead of the lens. A shutter covering the glass front was so constructed that it could be opened or closed by means of a solenoid controlled by a switch located inside the car. The starting and stopping of the camera movement was done by another solenoid controlled from inside the car. In order to have sufficient light under the car at the point of contact between wheel and rail, a 500-watt incandescent headlight was mounted on the car body back of the camera with its beam focused under the wheel. The car also was equipped with an indicating speedometer.

As a means of establishing a basis for comparison and to obtain a measure of the relative motion between wheels and rails of ordinary equipment, a series of motion pictures was taken with the test car operating over the track in the condition it was in when removed from regular service. When these pictures were projected on a screen it was noted that at speeds of more than 60 m.p.h. the wheel moved back and forth across the rail. The flange contacted the inside of the rail and the wheel then moved transversely across the rail as far as the flange on the opposite wheel on the same axle would permit. This movement was reversed as soon as the opposite flange contacted its rail, setting up a series of oscillations. These oscillations of the wheel were at a regular frequency of three contacts per second between wheel flange and rail. It also was noted that the oscillations of the wheel did not start until the car reached a speed of 60 m.p.h., that they were constant above this speed and that the frequency did not vary between 60 m.p.h. and 70 m.p.h., the highest speed attained during the tests.

The action of wheels with a newly-turned contour was then determined. The test car was sent to the

* As a result of tests, in which a slow-motion moving-picture camera was used to make a scientific study of wheel and rail reaction at high speeds, the Chicago, North Shore & Milwaukee has standardized on cylindrical-tread wheels, as described in this article. To what extent this practice can be expected to improve the riding qualities of steam railway equipment remains to be seen. Cylindrical treads are now being tried on some of the new light-weight high-speed trains, such as those of the C. B. & Q. and the B. & M. They have been used successfully on the multiple-unit electric trains of the Illinois Central for a number of years.



Test Equipment for Determining Wheel Oscillations: (Left) Camera Box Mounted on Truck Frame Extension, the Wheel and Rail Contact Being Illuminated by a 500-Watt Headlight; (Right) Close-Up View of Container Box with Side Removed to Show the Motion-Picture Camera

shop and the wheels turned to the standard A.A.R. wheel contour, with a straight taper on the treads of 1 in 20. In order not to introduce any other factor which might affect the oscillation of the wheels, no other part of the car body or truck was changed or repaired. The car was then operated over the test track and pictures taken of the relative motion between the wheels and the rails. These pictures, when projected on the screen, showed that the wheels still oscillated back and forth across the rails. The oscillations differed from those with the worn wheels in that the side movements were not as violent and not as constant. However, even with the newly turned wheels, the oscillations were still there, and occurred at the same frequency as with the worn wheels.

It was apparent from the pictures so far taken that the slope on the treads of the wheels and the difference between the wheel gage and the rail gage were factors in the nosing. In order to investigate these factors the test car was returned to the shop and the wheels were turned to a contour with a flange a little thicker than standard, and with the taper on the tread 1 in 40, or one-half the standard A.A.R. taper, as shown at *A* in the drawing. Here, again, no other part of the car body or trucks was changed or repaired.

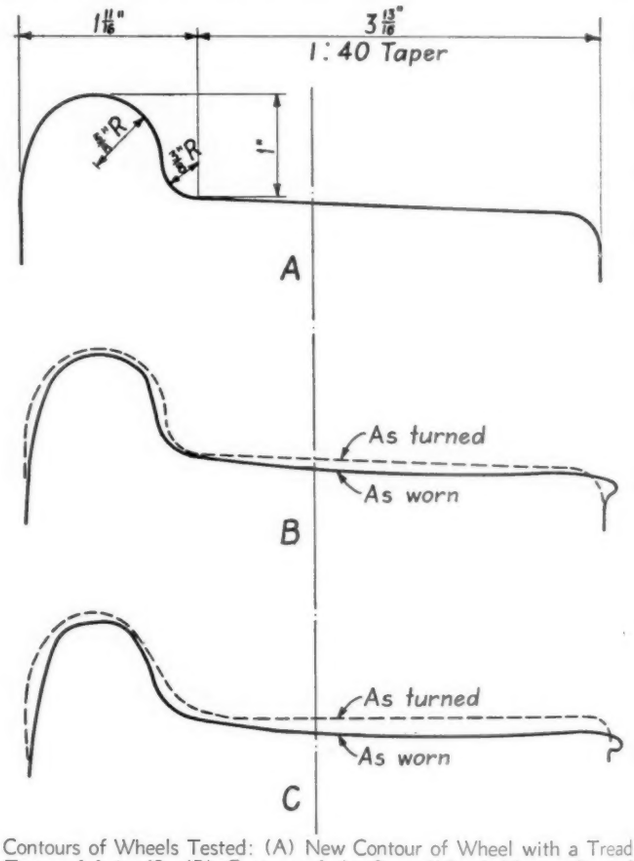
A series of pictures was taken of the relative motion between the wheel and the rail with the test car operating over the test track at speeds of more than 60 m.p.h. While the pictures were being taken a great improvement was noted in the riding of the test car. When the pictures were projected on the screen it was obvious that there was little side motion between the wheel and the rail. The pictures showed an occasional nosing with a few oscillations, but they were very gentle and soon broke up. The pictures showed that in general the wheels ran parallel to the track.

In order to determine what effect additional mileage would have on the car and what shape the wheels would take as they wore, the car was placed in regular passenger service. After operating approximately 16,750 miles it was removed from service and a set of pictures was made while it was run over the test track. While taking the pictures it was noted that the car had some tendency to nose but that it rode better than while it was being tested with the wheels turned to A.A.R. contour, either in new or in worn condition. The pictures showed that there was considerable side motion of the wheels, but it was slight and not continuous.

It will be noted from the contour of the wheel, shown at *B* in the drawing, that the tread of the wheel from the end of the throat radius to a point beyond the center of the tread had worn to a taper of approximately 1 in 20. The wear to this contour was, it was assumed, because all the rail on the North Shore Line has been worn to this slope, and that a standard brake shoe with a 1 in 20 taper was used on these wheels.

Due to the improvement in riding qualities of the test car which were obtained with the decrease in the slope of the tread, it was decided to make a test with cylindrical wheels. The test car was returned to the shop and the wheels were turned to a contour with a standard A.A.R. flange and throat radius, but from the end of the throat radius to the outside of the wheel the tread was turned flat instead of with any taper. Motion pictures were then taken of the wheel and rail with the car operating over the test track. A very marked improvement in the riding qualities was noted, and when the pictures were projected on the screen it was apparent that the wheels ran practically parallel to the rail. When there was any tendency to oscillate the movement was at a very low frequency that the flange seldom touched the rail. It was on the basis of these results that it was decided to adopt the cylindrical contour for all the wheels of the company's cars.

The car was returned to regular passenger service to determine what effect additional mileage would have on the riding qualities and the wear of the wheels. After the car had run 31,900 miles further it was removed from service and a set of test pictures taken while it operated over the test track. It was noted while the pictures were being taken that the car still rode very well. Projection of the pictures on the screen made it evident that while there was an occasional slight tendency to nose there were only a few oscillations at one time and that they were rather slow. The contour of the wheels had worn so that there was a taper between the end of the throat radius and the center of



Contours of Wheels Tested: (A) New Contour of Wheel with a Tread Taper of 1 in 40; (B) Contour of the Same Wheel After a Run of 16,750 Miles; (C) Contour of Wheel with Cylindrical Tread After a Run of 39,400 Miles

the tread of approximately 1 in 20. This form of wear, it is assumed, was due to the contact with the rail head, which as previously mentioned, has worn to this slope and to the use of a brake shoe with a taper of 1 in 20.

The test car was again returned to service. It now has run more than 45,000 miles with the cylindrical tread wheels. At 39,400 miles a contour of the wheels was taken. This is shown at *C* in the drawing. It will be noted that there has been very little wear at the throat radius. This always occurs on a wheel with the A.A.R. standard contour, even at a much lower mileage. From the end of the throat radius to a point beyond the center of the tread, the wheel has worn to a taper of approximately 1 in 20, due, it is assumed, to the slope on the top of the rails and to the brake shoes used. The test car still rides well and will be kept in regular passenger service under observation until it becomes necessary to turn the wheels on account of some type of wear having reached the limit.

The Need for Companies Providing All Forms of Transportation*

Genuinely effective co-ordination more important than mere co-operation

By Harold G. Moulton
President, Brookings Institution

IN recent years there has been a great and very significant shift of emphasis in discussions of transportation. Public thinking has been rapidly moving from the consideration of particular types of transportation agency—railroads, waterways, etc.,—to transportation in general. Discussions thus now commonly relate to the *transportation system* of the country and ways and means of co-ordinating or articulating the several types of public carrier into a unified whole. As a natural accompaniment of this shift of emphasis the conception has been emerging that what we are interested in fundamentally is *transportation service* to the people of the nation. Every other consideration is secondary to this basic one. I would state the essential requirement as follows: We, the people, ask of our transportation agencies simply that they move traffic, freight and passenger, in the cheapest and most efficient manner possible.

In pursuit of this objective there should be no predisposition to favor any particular type of transportation agency. It is immaterial whether all traffic moves by one form of transportation or another; whether certain types of traffic are carried exclusively by some particular agency; or whether all forms of transportation are used as parts of a co-ordinated system. The primary requirement is that freight and passenger traffic shall actually move by the particular transportation agency, or combination of agencies, which can carry it, all elements of cost considered, in the most economical and serviceable way.

In the light of the great changes which have occurred in recent years in the field of transportation, plans have been inaugurated which are designed to place our transportation system as a whole on a more satisfactory basis. Emphasis has been placed on the co-ordination of all forms of transportation. The concept of national planning has perhaps been developed further in this field than in any other. I shall therefore devote my attention primarily to a consideration of the basic issues involved in the effective co-ordination of transportation with a view to rendering the *transportation service* required in the most economical way.

Reasons For Lack of Co-Ordination

As a point of departure for our discussion of the co-ordination problem, it is desirable to review very briefly the reasons why we have an unco-ordinated system. The explanation is two-fold: First, the several types of transportation have been independently developed, some under private auspices and others with government support. The railways have been developed under private auspices, and the railway builders proceeded on the assumption that railways would be the primary, if not the exclusive, form of transportation. Waterways and highways have been developed chiefly through government enterprise, not with a view to co-ordination with railway facilities, but as independent agencies. Second, we have proceeded on the assumption that competition in the transportation field is essential in order to protect the public interest. This tendency has been particularly marked in the post-war period.

Mr. Eastman has well said: "For the past dozen years or so we have been promoting competition in transportion in every conceivable way and with a minimum of foresight as to what the result might be."

The Fittest Should Survive

As I have already indicated, the co-ordination of the various types of transportation facilities has now come to be accepted as a desirable principle. As Mr. Eastman puts it, the task is to "bind them all into a well co-ordinated whole, which means into an efficient national transportation system."

In connection with this idea, however, there is still much confusion as to the means whereby a truly unified system may be attained. In the first place, it appears to be assumed that all forms of transportation must necessarily be preserved.

Legislative proposals commonly declare that it is the policy of Congress to promote, encourage, and preserve all forms of transportation. It is evidently assumed that each type of transportation agency not only needs to be preserved in the interest of the public welfare but also requires further encouragement and development.

The same point of view finds repeated expression in the reports of the Co-ordinator, as the following quotations will indicate:

". . . I have repeatedly stated that each form of transportation is entitled to its place in the sun; that they are all here to stay; that each can perform some functions better than any of the others; . . . and that the prime objective of regulation is a well co-ordinated national system of transportation which will protect each agency in the place which it is best fitted to occupy."

It will be observed from this statement that the Co-ordinator is taking it for granted that each form of transportation has definite advantage for certain types of service and must, therefore, be preserved. This assumption can be validated only by the test of experience under conditions of equal competition. Economic progress requires, not the preservation of all forms of transportation regardless of efficiency for the purposes in hand, but rather the elimination of any type of transportation agency which has become economically obso-

* Address before the Transportation Conference, Chamber of Commerce of the United States, at Washington, D. C.

lete. Had this principle not been allowed to operate in the past, we would still be using the ox cart and stage-coach. We want a system which will weed out the less efficient forms of transportation agencies, and preserve those which prove themselves capable of doing the transportation business of the country in the most serviceable and economical way.

The Necessity of Competitive Equality

The central problem before the government is to establish a system of regulation which will ensure that those types of transportation which are capable of rendering the transportation services required will be enabled to survive and develop. If this goal is to be achieved, the fundamental need is that all forms of transportation be placed on a basis of complete competitive equality. That is to say, all transportation agencies must be treated in like manner with reference to taxation, governmental financial aid, and regulation. When this is done, each particular kind of traffic will automatically move over that particular type of transportation agency which can render the service required at lowest cost. But so long as any particular form of transportation agency is given special advantage over others in the form of subsidies from the government treasury, exemption from taxation, or freedom from the regulation of rates, standards of services, wages, etc., traffic may be artificially diverted to the less economical type of carrier.

Some forms of transportation are heavily subsidized; others scarcely at all. Some forms pay heavy taxes on the fixed properties; others pay none. Some are extensively regulated in the matter of wages and working conditions and rates; while others are virtually unregulated.

Three results flow from this anomalous situation. First, the comparative rates quoted to shippers do not reflect real costs. To the degree that subsidies or relief from taxation is afforded to one type of transportation agency, that agency is able to quote rates which are less than the social costs of performing the services. The balance of the costs is defrayed by the public treasuries —which means ultimately, of course, by the taxpayers of the country. The truth about the relative costs of transportation by the various types of agency is thus obscured. The portion that is borne by the government is buried in the general accounts of the treasury, and it is only when someone goes to the trouble of extracting the expenses incurred in connection with specific projects and of allocating these charges to the traffic moving over the routes in question, that the inclusive costs become known. When tolls are charged by the government sufficient in amount to cover the government's outlays, then the shipper, anyone else who is interested, knows the full cost—namely, the rate plus the toll cost. But the moment tolls are abolished and no effort is made to recoup the costs borne by the government, confusion reigns.

Second, traffic may no longer be shipped by the cheapest method—all elements of cost included. Shippers are concerned with *rates* only and they will route their traffic by whichever agency offers the lowest rate, regardless of what the inclusive *cost* may be. The deficiency which the taxpayer may ultimately have to face is of no direct concern. If the overhead costs borne by the treasury exceed the *rate differential*, the *inclusive social cost* of transportation is obviously increased.

Extensive Duplication of Transport Facilities

Third, this system has led to an extensive duplication of transportation facilities. Over the past 30 years the development of excess productive capacity has been greater in the field of transportation than in any other division of the economic system. The result has been a thinner spread of traffic, higher transportation rates, and higher taxes as well.

In the well chosen words of the Co-ordinator, Mr. Eastman, "The time has surely come to deal with these matters with an eye to the general welfare of the community, which in the end foots the bills. The present situation is shot through with waste, which somebody must pay for, and it is creating conditions which are destructive in many different ways. . . ."

Co-Ordination vs. Co-Operation

The distinction between co-ordination of transportation *service* and co-operation between separate transportation *agencies* is, as I shall hope to show, one of great significance. But first let me make it clear that although the word "co-ordination" is commonly employed current legislative proposals are merely concerned with co-operation.

It is apparent from Mr. Eastman's addresses that he is most of the time thinking about co-operation. Attention has already been called to his emphasis upon the maintenance of all forms of transportation. "They all have their proper places in the general scheme of transportation . . . The essential thing is to find that place, protect them in it, and avoid the waste and destruction, the discriminations, and general instability which will otherwise be the certain fruits of unrestrained competition."

He suggests free interchange and joint service between different agencies and says, ". . . there is little reason why they (the several types of agencies) should fight among themselves and every reason why they should abandon wasteful competition." He also suggests that the railroads "may be able to convert their enemies, and particularly the truck and bus, into allies. . . ."

These statements, it seems to me, imply the maintenance of separate agencies each having specialized tasks to perform. It implies moving traffic part way by a waterway company, part way by a railroad company, part way perhaps by a trucking company. The cooperation suggested relates chiefly to joint rates for through service which would give us co-operation between separate agencies but not necessarily unification of transportation service.

Only in one place in Mr. Eastman's addresses do I find a statement which indicates that he has real co-ordination in mind. In his address of June 5, 1934 he says: "The new forms of transportation, and particularly the truck and bus, can in many instances, and with much advantage to all concerned, be made an integral part of the railroad system." This clearly implies not co-operation between separate companies but truck, bus, and railroad service under a common management. This is the issue to which I now wish to direct your attention specifically.

Necessity For Transportation Companies

We cannot expect to have genuinely effective co-ordination in the common business of transporting goods so long as our transportation agencies remain as separately organized competing companies. Our goal is a system which will make it possible to move goods from point of origin to point of destination at minimum cost—which may mean in one case that the goods will move all the way by rail, in another all the way by highway, and in still another by water, rail, and highway. So long as the various agencies of transportation are completely independent, each one always desires to move the traffic all the way, or as far as possible, over its fa-

cilities, and there is always an attempt to make rates so as to accomplish this purpose. The reason of course is that, once loaded and on the line, the cost of moving goods added distances is relatively small. Railroad history is replete with illustrations of this principle.

Cheapest Agencies Would Be Employed

This problem cannot be solved by having the government arbitrarily adjust rates so as to make traffic move part way by one agency and part by another. The question of the cheapest rate, all factors considered, varies with different consignments and the special requirements involved. Such a problem can be handled effectively only by a single transportation company having freedom to use the various forms of transportation in whatever combination experience may prove to be the most economical in moving goods or persons from any place to anywhere. A transportation company would seek out the cheapest means or combination of means of moving traffic and would not be interested in having it moved most of the way by truck, railroad, or water, as the case might be, because of any special interest in some particular form of transportation. If it proved cheaper to send certain commodities by highway than by rail, they would send them by highway. If it proved cheaper to send them by combination method they would use several forms of transportation. Through experimentation we would gradually ascertain the proper place of each type of transport; and if some proved to have no legitimate field they would cease to be used.

The establishment of transportation companies would of course mean the abandonment of competition between the various types of transportation agency as a means of regulating rates. The transportation business would become more completely a monopoly than ever before. This would be, however, a gain rather than a loss—for the attempt to control railroad rates by means of competition, as already indicated, has never been a sound method of regulation but has led to enormous waste and heavier transportation burdens. The problem of regulation would remain, to be sure. But if all our forms of transportation were placed on a basis of economic parity with respect to subsidies, taxes, etc.—with the full costs of transportation imposed where they belong, upon the shipper—and if then the business of transportation were allowed to be conducted by transportation companies, the entire problem of regulation would be enormously simplified.

The granting of permission to companies to engage in all forms of transportation would not necessarily mean that no companies would remain which would be engaged in specialized transportation service. We would still have, particularly in the field of local transportation, independent companies engaged in specialized services.

The Problem of Regulation

What we need then is a flexible system which will make possible real experimentation in the business of providing the most efficient types of transportation service. Co-operation between independent agencies—which would have to be mainly forced co-operation—will not provide effective co-ordination of transportation service. And it is cheap and efficient service in which we are interested.

Incidentally, it may be noted in this connection that in the early days of our history national thinking ran in terms of transportation rather than in terms of particular types of transportation agency. Some of the early charters granted to transportation companies had it in mind that highway, water and rail transportation might all be undertaken. This is indicated by charters conferring broad powers such as the New Jersey Railroad and Transportation Company.

Transportation is a public utility and whether conducted by specialized types of agency or by integrated companies the interest of the public in good service and in just, reasonable, and non-discriminatory rates must be protected by the commission and the court. Regulation of rates involves always a two-fold problem: (1) To insure that the particular rates shall be fair and equitable; and (2) to protect the public from possible excessive rates for transportation service as a whole. In the limited time at my disposal, discussion must be confined to the latter problem. I shall summarize very briefly what I believe to be the major lessons to be drawn from our experience in the regulation of rates.

First, experience has shown the impracticability of adjusting the general level of rates. In the decade following the passage of the Transportation Act of 1920 an effort was made to regulate the general level of rates so as to give the railroads as a whole a fair return on the investment. The primary difficulty is that different conditions exist in different parts of the country and a variety of considerations have to be taken into account in fixing rates. Between 1920 and 1930 the commission made little, if any, use of its physical valuation data in the adjustment of the level of rates. The horizontal increase of freight and passenger fares in 1920 was, in fact, justified partly on the ground that a larger aggregate return was desirable; but the expected results were nullified by the industrial depression which shortly followed. The general reductions in rates granted in 1922 were not made with a view to decreasing excessive railroad earnings but in the hope that lower rates might increase traffic and revenue. Trunk line class rate advances in 1930 were based on the two-fold consideration of financial need and capacity of the traffic to bear some increase. The increases of 1931 were granted not in the thought that they would ensure a fair return on railroad properties as a whole but only as a means of forestalling bankruptcies, if possible.

Stability Unattainable Through Rate Adjustments

Experience has also demonstrated that it is impossible to adjust rates from year to year so that all of the railroad systems of the country will enjoy stable earnings, with none obtaining excessive returns. The commission recognizes "The great practical difficulties in attempting to maintain, even approximately, a constant level of railroad net earnings, regardless of changes of one sort or another in economic conditions." There would be difficulties involved even if we had a single transportation company for the United States as a whole. When we have a large number of independent companies operating under widely varying conditions the difficulty becomes an impossibility.

Second, experience has shown that we need a flexible principle of rate determination. No single theory of rate-making can prove satisfactory when prices and economic conditions are fluctuating. In a period of rising prices the original cost theory protects the public from higher rates than are necessary to ensure adequate railway service; while in a period of falling prices the utilization of this principle prevents the public from procuring as low rates as might be obtained without handicapping transportation development.

Under no single principle of valuation can we escape the effects of the problem produced by general price fluctuations and by technological changes. The acceptance of either the investment or the reproduction cost principle as the sole basis of rate regulation would

mean, for example, that owners of obsolete lines should now somehow be permitted a return upon the investment —computed on one cost basis or another.

We live in a world of constant change, and we must accordingly have a flexible theory of rate-making. What we want is a transportation system that will adequately perform the transportation service required at a given time, expand or contract to meet the varying needs of commerce, and also provide, in so far as possible, the stability which is required in the interests alike of shippers, investors, laborers, and the taxpaying public.

The rule of rate regulation recently suggested by the Interstate Commerce Commission merits endorsement. It reads:

"In regulating the general level of rates, fares and charges, the commission shall, among other things, be guided by the need for producing, so far as possible revenues which will be sufficient for the maintenance of an adequate national railway transportation system; and also shall recognize the principle that the railroads may justly earn a surplus in times of prosperity as a safeguard against deficiencies in times of depression."

If the word "railway" be dropped, this statement would apply to the type of transportation system which we have discussed in the preceding section.

This suggested rule of rate-making allows for flexibility in administration, emphasizes the duty of the carriers to provide the most efficient possible transportation service, and recognizes the necessity of earning revenues sufficient to permit the roads to obtain the capital that is necessary for the efficient conduct of transportation. At the same time, it does not imply the indefinite maintenance of obsolete railroad properties or a level of rates out of line with the changing level of other costs and prices.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading for the week ended August 24, totaled 626,373 cars, an increase of 11,367 cars above the preceding week, and 19,456 cars above the corresponding week in 1934, but a reduction of 11,137 cars below the corresponding week in 1933. All commodity classifications except grain and grain products showed increases as compared with the week before while all but live stock, coal and merchandise l. c. l. showed increases as compared with last year. The summary as compiled by the car service division of the Association of American Railroads, follows:

Revenue Freight Car Loading

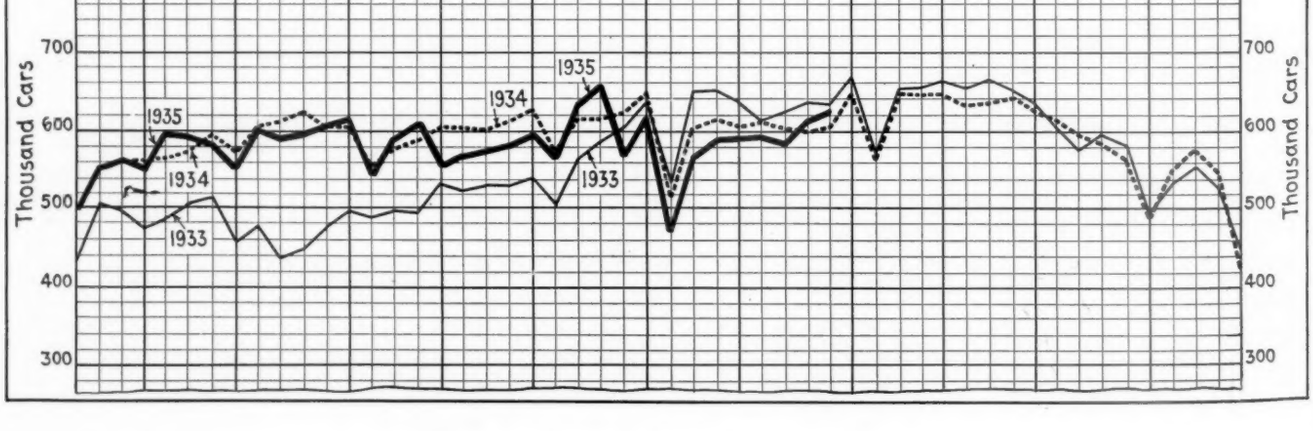
For Week Ended Saturday, August 24, 1935

Districts	1935	1934	1933
Eastern	129,338	126,654	141,283
Allegheny	117,168	109,073	127,428
Pocahontas	44,463	41,075	49,012
Southern	85,559	81,038	83,746
Northwestern	101,421	96,911	96,304
Central Western	98,063	98,945	90,609
Southwestern	50,361	53,221	49,128
Total Western Districts	249,845	249,077	236,041
Total All Roads	626,373	606,917	637,510
Commodities			
Grain and Grain Products	40,452	36,703	28,727
Live Stock	15,042	32,309	18,804
Coal	99,933	101,995	130,336
Coke	5,185	4,234	6,468
Forest Products	30,756	21,560	27,182
Ore	35,204	27,745	38,718
Merchandise L.C.L.	159,794	160,734	168,822
Miscellaneous	240,007	221,637	218,453
August 24	626,373	606,917	637,510
August 17	615,006	601,788	634,406
August 10	583,743	603,968	629,743
August 3	597,083	612,660	620,482
July 27	596,462	610,042	644,839
Cumulative Total, 34 Weeks	19,826,999	20,212,971	18,373,831

Car Loading in Canada

Car loadings in Canada for the week ended August 24 totaled 43,851, compared with 48,220 last year and 43,101 cars for the previous week, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
August 24, 1935	43,851	18,100
August 17, 1935	43,101	17,728
August 10, 1935	41,750	17,337
August 25, 1934	48,220	17,566
Cumulative Totals for Canada:		
August 24, 1935	1,458,515	726,624
August 25, 1934	1,442,922	752,802
August 26, 1933	1,218,599	616,038



Are "Trainload Lot" Rates Feasible?

Prior refusals of I. C. C. to permit such rates should not be considered conclusive

By G. Lloyd Wilson
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THE Freight Traffic Report of the Federal Co-ordinator suggests that rates lower than carload rates be established upon basic commodities such as petroleum, grain, coal, ores and lumber, moving in solid trainload lots, in order to afford the railroads an opportunity to compete for such traffic with competitive pipe line and waterway carriers. This suggestion raises the question whether or not railroads could legally establish rates contingent upon the simultaneous shipment of goods in quantities aggregating solid trainloads under the Interstate Commerce Act as administered and interpreted by the Interstate Commerce Commission and by the courts.

The movement of freight in solid train loads would reduce materially, if not eliminate entirely, the expenses incident to collecting and assembling the cars into trains at the originating terminals, the classification of cars at intermediate yards enroute, and the distribution of the cars at the destination yards. All that the railroads would need to do in such cases would be to provide and change motive power at the originating and junction points. The yard expenses constitute over half of total railroad freight movement costs. The average number of cars in all freight trains moved in 1932 was 26 loaded cars. Manifest or scheduled freight trains averaged 48 loaded cars; and dray, tonnage, or dead freight trains used in many instances to transport basic freight of the types to which solid trainload movement is particularly useful, averaged 32 loaded cars.

Cargo Rates Now Available to Large Shippers

The argument that large lot rates would tend to crush small shippers, needs to be examined in the light of present-day conditions. Large shippers of basic commodities are able to ship such goods in solid cargo lots at favorable rates by water carriers, or use private shipping facilities, or avail themselves of the minimum tender requirements for shipment by pipe line, or use proprietary or closely affiliated pipe line facilities. Small shippers would find themselves able to either use the train load freight rates alone or in combination with other small shippers by combining their shipments.

The I.C.C. and Multiple Car Rates

The statement has been made frequently that the Interstate Commerce Commission has specifically disapproved trainload lot rates as unduly prejudicial of small shippers and unduly preferential of their larger competitors, but this statement as it stands is not quite accurate, because the Commission has not been called upon to decide the legality of tariffs providing rates on multiple car shipments of more than 24 cars, and in many cases a much smaller number of cars. Such rates cannot be considered trainload rates under present-day conditions of transportation.

The Interstate Commerce Commission has had the justifiability and legality of freight rates contingent upon the shipment of multiple-car lots of goods at one time before it directly in three cases in which the legality of tariffs were challenged, and upon numerous occasions the Commission has remarked upon such rates as dicta in passing upon rate questions.

In the case of Paine Bros. & Co. v. Lehigh Valley R. Co., et al, decided June 24, 1897, the question of the legality of a freight tariff, filed by the Lehigh Valley Railroad in March, 1896, was challenged. The tariff established rates on "cargo" or "trainlots" of ex-Lakes grain, grain brought down the Great Lakes by steamer and transferred to the rail line at an eastern Great Lakes port, contingent upon the shipment at one time of 8,000 bushels or over of wheat, corn, rye and barley; and 10,000 bushels or over of oats. The rates upon the "cargo" or "trainlots" shipment were on a lower basis than the corresponding rates on carload shipments from Buffalo, N. Y., to North Atlantic Ports. The Commission ordered the defendants to revise the rates and indicated without making a formal order that the effect of "cargo" or "trainlots" rates would be to give the larger dealer a monopoly of the business, and upheld the contention of complainants that "cargo" or "trainlots" rates were unreasonable and unjust and subjected complainants to unreasonable prejudice and disadvantage and would give undue preference and advantage to shipments of grain in large lots in violation of Sections 1, 2 and 3 of the Interstate Commerce Act.[1]

20 Cars Not a Trainload

In the case of Woodward-Bennett Co., v. S. P. L. A. & S. L. R. Co., decided March 2, 1914, the tariff of the defendant carrier providing four different levels of rates contingent upon the number of carloads shipped at one time for the transportation of cattle in carload lots, was held to be unlawful. The tariff of the carrier provided the highest rate on shipments of less than 8 carloads at one time; a somewhat lower rate upon the shipments of 8 to 14 carloads at one time; a still lower rate on shipments of 15 to 19 carloads at one time; and the lowest basis of rates on shipments of 20 carloads or more.

In its decision in this case the Commission held:

> A lower rate for a train load lot than for a carload is regarded as unlawful, because it is in effect allowing lower rates upon a condition that only a few shippers can comply with, and consequently is an injustice to those unable to ship the required quantity.[2]

In the case of Miller & Lux, Inc., v. S. P. Co., et al, decided November 9, 1916, the Commission found unreasonable rates charged for the transportation of range or feeder cattle in carloads from points in California and Oregon to points in California and Nevada, made upon the basis of higher rates for single car shipments than for shipments of a larger number of cars at one

[1] I.C.C. Docket No. 451, (7 I.C.C. 218).
[2] I.C.C. Docket 5690, (29 I.C.C. 664).

time, ranging from 12 or more, to 15 or more cars. In its decision in this case the Commission stated:

The Commission has repeatedly held that the fact that certain traffic is handled in train-lot loads cannot be made the basis of rates different from those applied to shipments in single carloads.[3]

Trainloads as a Factor Justifying Lower Carload Rates

In several cases involving the reasonableness of carload rates upon various commodities, the Commission has commented upon the desirability and legality of "trainlot" rates, even though the question of "trainlot" rates has not been directly raised in the cases.

In Anaconda Copper Mining Co., v. C. & E. R. Co., et al, decided December 12, 1910, stress was laid upon the fact that blast furnace coke moved in train-lot quantities, while other coke ordinarily moved in carload lots only as a reason for justifying lower carload rates on blast furnace coke than on other coke. In its decision in this case the Commission stated:

Whatever difference there may be in the cost to the carrier between traffic in train-loads and traffic in car-loads, it appears from the general course of legislation with respect to commerce between the states, from the debates and reports to the various committees in Congress when the Act to Regulate Interstate Commerce was under consideration, from the better considered court opinions, and from the reports and opinions of this Commission that to give greater consideration to train-load traffic than to carload traffic would create preference in favor of large shippers and be to the prejudice of small shippers and the public.[4]

In Rickards v. Atlantic Coast Line R. Co., decided April 1, 1912, rates charged for the transportation of mine-prop logs from points in North Carolina to Norfolk, Va., were found unjust and unreasonable insofar as they exceeded the rates contemporaneously applied to saw-logs.

The argument was advanced that mine-prop logs were handled in single carloads while saw-logs were moved in solid trains. The Commission stated:

The fact that certain traffic is hauled in train-load lots while other traffic moves in carloads cannot be made the basis of difference in rate.[5]

In Planters' Compress Co., v. C. C. C. & St. L. R. Co., et al, I. C. C. Docket No. 692, (11 I. C. C. 382), decided October 19, 1905, the refusal of defendant carriers to grant lower carload rates on cotton in carloads of 45,000 lb. or over than the rates made upon cotton in any quantity lots, carload or L.C.L. was held not to be a violation of the Interstate Commerce Act.[6] A similar conclusion was reached in American Round Bale Press Co. v. A. T. and S. F. R. Co., and in Anderson, Clayton and Co. v. A. T. and S. F. R. Co., decided December 24, 1914.[7]

In ex-Lake Iron Ore from Chicago to Granite City, Ill., decided December 28, 1926, and reaffirmed in a later decision handed down April 11, 1927, the proposed reduced rate on ex-Lake iron ore in carload lots from Chicago to Granite City, Ill., was found reasonable and justified, the suspension order was vacated and the order of the Commission in the first hearing was affirmed on reargument.

Attention was directed by the protestants to the policy of the Commission not to permit lower rates upon train-lot quantities of freight than on carloads. The Commission stated:

We are not permitting such a rate here nor does anything here said or done forecast in any way a change in the policy mentioned. The fact that traffic to which (the reduced rate) will apply will in all probability move largely in train-load quantities is, however, clearly pertinent in considering whether the rate will cause gain or loss to respondents.[8]

In Private Wire Contracts, decided August 3, 1918, the Commission in commenting upon principal of rate making contingent upon the number of carloads shipped simultaneously, stated as a dictum that:

There is no proper analogy between private wire service and the practice of aggregating shipments into carload lots and shipping them at car-load rates.[9]

No mention was made nor question raised with respect to train-lot rates.

In dicta in a number of other cases the Commission has commented in passing upon the general policy with respect to making rates upon trainloads as compared with single carload lots.

In Kingan & Co., v. Director General, Agent, decided May 27, 1924, the Commission found a rate of $5 per car for the movement of livestock from stockyards to packing plant in Indianapolis not unreasonable. No question of trainload rates was raised but in commenting upon the fact that some, but not all, of the cars moved in solid trains the Commission stated laconically:

We have never favored reduced rates per train-load.[10]

In Advances in Rates for Transportation of Coal, decided March 11, 1912, involving the suspension of increased rates on coal in carloads, the Commission stated:

There could be no better illustration than this of the fallacy of placing reliance upon ton-mile earnings as a basis for rate-making. As the Commission has heretofore found in many cases, a much fairer basis is that found in the earnings per car-mile and per train-mile. Much of the profitable freight carried by the railroads of the United States, and perhaps this might be made broader and it could be truthfully said that most of the freight which pays the carriers the best is that which yields the lowest rate per ton-mile.[11]

In a number of cases the Commission has commented upon the fact that increased trainloads, increased car capacity, increased density of traffic, material decrease of the ratio of operating expenses to income, and the elimination of grades all are factors which should be considered in making lower rates.[12]

In North Fork Cannel Coal Co., v. Ann Arbor R.

(*Continued on page 310*)

[3] I.C.C. Docket 7509, (41 I.C.C. 617).
[4] I.C.C. Docket No. 2386, (19 I.C.C. 592).
[5] I.C.C. Docket No. 3926, (23 I.C.C. 239).
[6] I.C.C. Docket No. 692, (11 I.C.C. 382).
[7] I.C.C. Docket 5758, (32 I.C.C. 458).
[8] I.C.C. I. and S. Docket 2709, (120 I.C.C. 75), and (123 I.C.C. 503).
[9] I.C.C. Docket No. 5421, (50 I.C.C. 731).
[10] I.C.C. Docket No. 12349, (89 I.C.C. 550).
[11] I.C.C. I. and S. Dockets Nos. 26, 26-A, 26-B and 26-C, (22 I.C.C. 604).
[12] In this connection the decision of the I.C.C. in the following cases in point: Meeker & Co., v. Lehigh Valley R. Co., I.C.C. Docket No. 1180, (21 I.C.C. 129), decided June 8, 1911, in which the order of the Interstate Commerce Commission was sustained; in Lehigh Valley R. Co., v. U. S. (190 Fed. 1023), decided October 12, 1911, and affirmed in (204 Fed. 986), April 25, 1913; In re Advances in Rates on Flaxseed, I. & S. Docket No. 78, (23 I.C.C. 272), decided April 8, 1912; Wharton Steel Co., v. D. L. & W. R. Co., I.C.C. Docket No. 4334 and Nichole & Co., v. D. L. & W., I.C.C. Docket No. 4390, (25 I.C.C. 303), decided November 12, 1912; Consolidated Fuel Co., et al, v. A. T. & S. F. R. Co., et al, I.C.C. Docket No. 3811, (24, I.C.C. 213), decided June 3, 1912; St. Louis Independent Packing Co., et al, v. C. & A. R. Co., et al, I.C.C. Docket No. 11566, (73 I.C.C. 459), decided September 29, 1922; Lackawanna Steel Co., et al, v. Pennsylvania R. Co., et al, I.C.C. Docket No. 13445, (88 I.C.C. 759) decided April 21, 1924; Petroleum from Arkansas to Louisiana and Texas, I. & S. Docket No. 2481, (104 I.C.C. 651), decided December 12, 1925; Grain and Grain Products, I. & S. Docket No. 2777, (122 I.C.C. 301), decided February 8, 1927; American Round Bale Press Co., v. A. T. & S. F. R. Co., I.C.C. Docket No. 5758, and Anderson, Clayton & Co., v. A. T. & S. F. R. Co., (32 I.C.C. 458), decided December 24, 1914; 1915 Western Rate Advance Case—Part II, I. & S. Docket No. 606, (37 I.C.C. 114), decided December 15, 1915; Diamond Lumber Co., v. C. M. St. P. & P. R. Co., I.C.C. Docket No. 8360, (43 I.C.C. 65), decided January 23, 1917; and Express Rates 1922, I.C.C. Docket No. 13930, (83 I.C.C. 606), decided November 10, 1923.

Union of Three Western Lines Proposed by Stockholders

Plan involves Rock Island, Frisco and C. & E. I.— Reorganization to be included in program

CONSOLIDATION of the Chicago, Rock Island & Pacific, the St. Louis-San Francisco and the Chicago & Eastern Illinois is proposed in a plan presented to the Interstate Commerce Commission and the federal district court at Chicago on August 30 by the protective committee for the Rock Island's 6 and 7 per cent preferred stockholders. It would create a system of 15,000 miles of lines serving such widely separated points as the Twin Cities, Minn.; Chicago, Ill,; Evansville; St. Louis, Mo.; Kansas City; Memphis, Tenn.; Pensacola, Fla.; Houston, Tex.; Fort Worth; Oklahoma City, Okla.; Santa Rosa, N. M.; Denver, Colo.; Omaha, Neb.; Sioux Falls, S. D., and Watertown. It is the first plan to be put forward by stockholders under the modification of the bankruptcy act permitting stockholders to submit proposals.

The stockholders' proposal is unique in that it is not confined to the reorganization of one system but provides for the consolidation and reorganization of three companies, all of which have filed petitions for reorganization under Section 77 of the amended bankruptcy act, thereby creating a 15,000-mile system with a total capitalization of about $800,000,000, of which nearly 75 per cent initially would be funded debt. Capitalization per mile would approximate $54,000, while total assets would be more than $384,000,000, against which reserves of more than $132,000,000 would be set up.

The proposal brings together again these three roads, which have been so closely associated during the last 30 years, when one or the other has had control of a substantial interest in one or both of the others. With the expansion of the Rock Island soon after 1900, control was obtained by the Reid-Moore-Yoakman group, and under this control the Rock Island acquired control of both the Frisco, while, in addition, the Frisco obtained control of the C. & E. I. This arrangement continued until 1915.

In general the plan does not provide for a drastic scaling of the total debt structure, for sinking funds and retirements are expected to have a salutary effect in the course of time in redressing the structure. The annual fixed charges of the new company during the first five years would be about $2,600,000. The company would have a working capital of about $14,000,000 and have unpledged in its treasury about $6,900,000 of underlying mortgage bonds for paying compensation and undetermined claims. A banking syndicate would be formed under the plan to market any shares not subscribed for by present stockholders of the three roads.

Underlying Liens Undisturbed

Present creditors and equity holders under the plan are treated as follows:

1—R.F.C. or R.C.C. and bank loans to be repaid out of earnings within a period of eight years.

2—C. & E. I. equipment trust notes to be assumed with an 18 months' period of grace for both principal and dividends.

3—Equipment trust notes of the Rock Island and Frisco to be funded into a new series of notes without change in interest rate and to be secured by the same aggregate equipment as at present. A mandatory sinking fund of approximately $4,000,000 a year, equal to the annual depreciation charge on the pledged equipment, estimated at $4,000,000, is provided in lieu of specific maturities. Sinking fund purchases would be made on the open market, retired notes to be kept alive in the fund.

4—Underlying liens to be undisturbed as to principal amount, accumulated interest and the nature of the liens, except for St. Paul and Kansas City Short Line and Rock Island, Arkansas and Louisiana bonds.

5—Holders of Short Line bands, outstanding at the rate of more than $66,000 a mile, would receive 50 per cent in new first mortgage bonds of identical lien and 50 per cent in new refunding mortgage bonds.

6—Holders of R.I. A. & L. bonds, outstanding at the rate of just under $42,000 a mile on mileage that carries relatively light traffic, would receive 50 per cent in new refunding mortgage bonds and 50 per cent in new preferred stock.

7—Rock Island general 4s of 1988 to become general 4s of 1936, a reduction of 25 years in the maturity.

8—Various underlying liens to have their maturities extended from 5 up to 25 years and in the case of the Burlington, Cedar Rapids & Northern consolidated 5s, the interest rate to be cut to 3 per cent with a 2 per cent annual sinking fund.

9—The creation of one new major mortgage representing approximately the aggregate lien of the Rock Island first and refunding, the Frisco prior lien and consolidated, and the C. & E. I. general mortgage. Bonds issued against this mortgage would be issued in varying proportions in the refunding of present junior lien issues.

10—Present unsecured issues to be exchanged for new preferred stock par for par.

Stockholders to Raise $4,700,000

11—Stockholders of the three roads will be asked to raise $4,700,000 of new capital through subscriptions in varying amounts, depending on the nature of the holdings. Non-subscribers will be accorded proportional treatment, dependent on the market value of the new stock on issuance. As an example, if the common stock has a value of $5 a share on issuance, non-subscribers would receive 40 per cent of their present holdings in the case of the Rock Island, reorganization and market expenses, etc., being estimated to approximate $3 a share.

12—Holders of Rock Island preferred, both classes, would receive one-half share of new preferred and one

new $50 par common share, upon payment of $2.50 a share.

13—Holders of Rock Island common would receive one new $50 par common of present common, on payment of $2.50 a share.

14—Holders of Frisco preferred and common would each receive half a share of new common per share held, on payment of $1.25 a share.

15—Holders of C. & E. I. preferred would receive half a share of new common without subscription and another half share on payment of $1.25.

16—Holders of C. & E. I. common would receive half a share of new for each share of old, on payment of $1.25 a share.

In the opinion of the committee, the consolidation offers many operating advantages. "It is not contended," the committee states, "that immediate marked economies of operation will result or that the three roads should or indeed could engage in a wholesale consolidation of facilities. The plan is primarily offered as a means of putting each of these three bankrupt railroads in a position to do much better in securing traffic and handling it economically as a part of a consolidated system than is possible for any of the three alone.

"The system would have access to every important shipping center in the middle west and own its own lines to the gulf ports of Galveston and Pensacola and have important connections at Mobile and New Orleans. It would be one of the most important factors in American agricultural life.

"It is believed that within less than 10 years after reorganization the new company will have equity and reserves equal to or greater than its total debt. The accomplishment of this by the use of actual sinking funds, instead of drastic 'surgical' operation at the time of reorganization are the outstanding features of the plan. Were the plan to be adopted, all of the existing parties would find themselves protected, not only at the time of reorganization but throughout the period until the maturity of the very last bond issues, against impairment of the rights assigned to them in the plan.

"The plan does not depend upon any advances from the R. F. C. or any governmental division or banking institution. A board of directors of 19 members would be set up, 10 to be selected by creditors and 9 by stockholders. Whenever a creditor's interest rate becomes fixed his representation would pass to the share holders."

Are "Trainload Lot" Rates Feasible?

(*Continued from page 308*)

Co., et al, decided November 12, 1912, the Commission in commenting upon the reasonableness of carload rates on cannel and bituminous coal stated:

> The fact that cannel coal moves in single car lots while there is a train-load movement of bituminous coal justifies a higher rate on the former (cannel coal) than on the latter (bituminous coal). * * * Solid trains of cannel appear to be unknown, while such a movement is the rule rather than the exception from bituminous fields.[13]

In Carstens Packing Co., v. O. S. L. R. Co., et al, decided December 7, 1909, the question of the validity of a ten-car rate was referred to but not decided by the Commission. The Commission observed enigmatically:

> Whether carriers may legally maintain lower rates for traffic in ten or more carloads than upon single cars is doubtful. * * * nothing herein shall be taken either as approval or acquiescence in a ten-car rate, or * * * in wholesale rates of any kind beyond the carload rate.[14]

In a relatively recent case, Live Stock Rates—Southern Territory, decided December 8, 1930, carload rates on livestock based upon distance scales were found not unreasonable. In a decision in this case, the Commission commented:

> It is reasonable to assume that the movement of livestock in train loads makes for lower transportation costs.[15]

In J. W. Wells Lumber Co., v. C. M. & St. P. R. Co., decided March 14, 1916, the Commission denied reparation on shipments of logs from points on the Superior Division, Wis., to Menominee, Mich., on the ground that the rates had not been shown to be unreasonable. The Commission reiterated its policy that the fact that certain traffic is hauled in trainload lots cannot be made the basis of rates different from those applied to shipments in single carloads and held that the defendant should immediately discontinue publishing lower rates on shipments of lots of more than one car than on carload shipments, but held that the complainant in this case was not entitled to reparation because the lower rate from the more distant point was predicated upon the shipment of 20 carloads or more at one time and therefore there was no violation of the Fourth Section of the Interstate Commerce Act with respect to shipments in any number of cars less than the specified number.[16]

The Justification of Trainload Rates

The decisions of the Commission refusing to permit the establishment of "multiple car" or "trainload lot" rates should not be considered as conclusive under present conditions in the field of transportation. It should be noted that none of the Commission's decisions were concerned with tariffs naming rates upon shipment in multiple car lots amounting to solid trainload lots under present standards in transportation. Moreover, the refusal by the Commission to permit the establishment of trainload rates does not appear to be wholly consistent with the increased emphasis placed in recent years by the decisions of the Commission upon the cost of transportation as a factor to be given increased weight in rate making, as evidenced by the increased use of mileage rate scales and the emphasis placed by the Commission upon ton-mile and car-mile costs in rate cases.

It would appear that the use of trainload lot rates is justified if there is material difference between the cost of transporting solid trainloads and the cost of transporting the same commodities in single cars or several car lots. The trainload rates should be contingent upon a number of cars sufficient to make up a solid trainload so as to eliminate classification in the terminals and at intermediate yards. The spread between the train-lot and single carload rates should be commensurate with the difference in cost of transportation and not so unduly large as to be arbitrary or unduly prejudicial to the shippers of smaller lots. Both train-lot and carload rates should each be reasonable per se. The trainload lot rates should be made upon the same principle that water-competition and truck-competition railroad freight rates are made, that is to specifically meet the competition of competitive carriers, in this case the pipe lines and water lines, and only if it is demonstrated that it is within the power of the railroad carriers to transport the traffic in competition with other rivals at compensatory rates.

[13] I.C.C. Docket No. 4734, (25 I.C.C. 241).

[14] I.C.C. Docket No. 2029, (17 I.C.C. 324).

[15] I.C.C. Docket 17000, Part 9,(171 I.C.C. 721).

[16] I.C.C. Docket No. 7157, (38 I.C.C. 464).

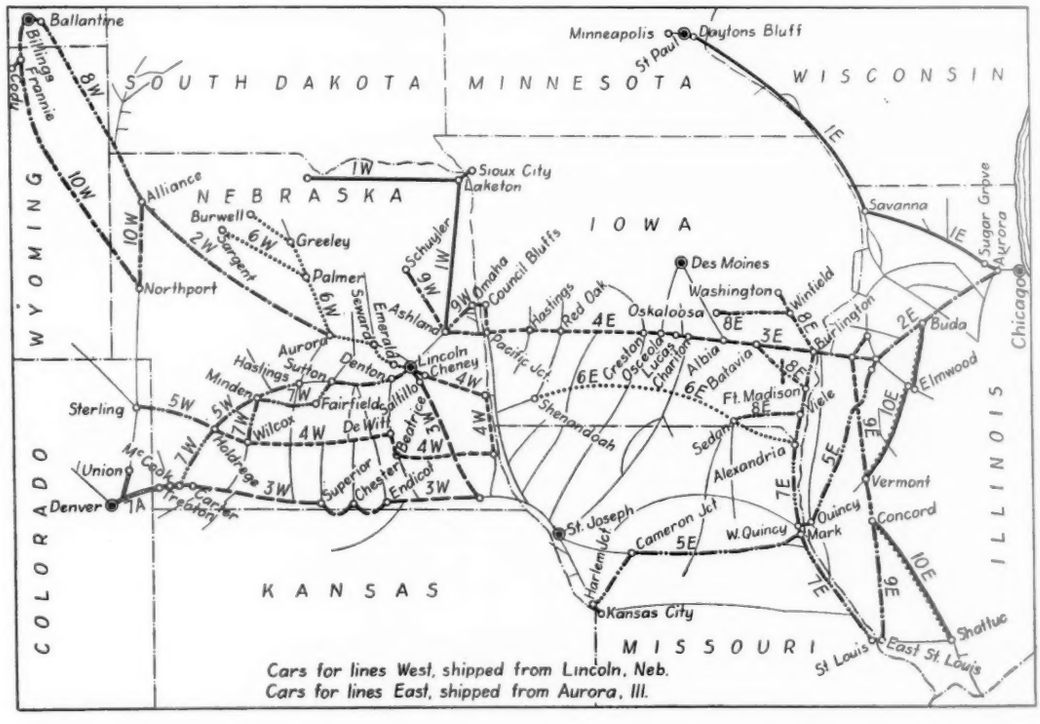
Train Crews Deliver Supplies on Burlington

Find way freight more flexible and cheaper for distributing station and section materials—Drop handling at freight houses

CONFRONTED with the problem of distributing materials to 1350 stations on 9000 miles of lines, the stores department of the Chicago, Burlington & Quincy operates neither supply trains nor supply cars, but handles these materials in the same manner as revenue freight except that, as recently arranged, company materials avoid freight houses. Way-car methods of supplying materials have been considered more economical than supply trains and supply cars on this road for many years, dispensing with special equipment, extra crews and attendants,. and, during the present period when many roads have put their supply-car operations on a 60- or 90-day basis, they have enabled the stores forces of this road to provide flexibility of service, which has led subsidiary lines to introduce similar methods of handling line-of-road materials.

The position taken by the Burlington, as expressed by R. D. Long, general storekeeper, is that, where special conditions require and there is a large quantity of heavy or bulky material to be handled, supply trains, with their derricks, oil cars and other special equipment, may provide the best solution of the line delivery problem, but that the cost of operating such equipment and also the cost of operating supply cars may easily be excessive unless the volume of the supply work and the train service work performed at the same time are large and can be well co-ordinated with the working time of the train station forces. The Burlington is divided into the Lines East of the Missouri river, which are supplied from the general store at Aurora, Ill., where the system reclamation plant is also located, and the Lines West of the Missouri river, which are supplied from the storehouse at Havelock, Neb., near Lincoln, On the Lines East, requirements for supply-car materials, which consist of stationery and station supplies and supplies for the maintenance of way, water station, treating plant and signal and telegraph forces, total approximately 250 tons per month, valued at about $25,000. While diversified and necessary to the operations of the road, this tonnage is not considered sufficiently large to justify special arrangements for supply service, especially because of so many branch lines and the wide differences in the requirements of different stations.

Contrasted with supply trains and supply cars, both of



A Chart of the Line-Car Routes on the Lines East and Lines West—Light, Unbroken Lines Represent Mileage not Served by Line Cars

which carry stores attendants to supervise the distribution of materials ordered by line forces and the collection of materials being returned to the stores, and which are usually met by the agents and track forces ordering material, the present practice on the Burlington is to ship all such materials in line cars, which are loaded at the stores and move in regular freight service over separate routes as often as required, in accordance with predetermined schedules and without attendants. Depending upon the territory, these cars may supply local storehouse points, as well as consignees on the line of road, and may be distributing material over several different routes at the same time so that delays on one route do not disturb schedules on other routes.

Stations Served and Cars Loaded on Routes Served by Line Cars

Route		Stations	Trips per Month	Cars per Trip	Tons per Car, Av.	Tons per Month, Av.	Tons Returned
		LINES EAST					
1	Sugar Grove, Ill., to Daytons Bluff, Minn.....	89	2	3	10.0	60.0	4
2	Montgomery, Ill., to Burlington, Iowa.	32	2	2	7.5	30.0	4
3	West Burlington, Iowa, to Chariton	87	1	4	8.5	34.0	4
4	Lucas, Iowa, to Pacific Junction	105	2	3	10.5	31.5	4
5	Abingdon, Ill., to Kansas City, Mo.	161	2	2	9.0	36.0	4
6	Wayland, Mo., to Shenandoah	82	1	2	7.0	14.0	4
7	Wever, Iowa, to North St. Louis, Mo.....	43	1	2	8.0	16.0	4
8	Burlington, Iowa, and branches	76	1	2	6.0	12.0	4
9	Rio, Ill., to East St. Louis	49	1	1	7.5	7.5	4
10	Buda, Ill., to Centralia	83	1	3	9.0	27.0	4
		LINES WEST					
1	Ashland, Neb., to O'Neill	36	2	1	7.5	15.0	0.6
2	Aurora, Neb., and Murphy, to Alliance.....	41	2	1	15.0	37.0	1.8
3	Saltillo, Neb., to Carter	44	2	1	7.5	15.0	1.5
4	Cheneys, Neb., to Holdrege	47	2	1	5.5	11.0	0.7
5	Hastings and Loomis, Neb., to Sterling, Colo.	30	2	1	10.0	20.0	1.3
6	Emerald to Sargent—Cushing to Burwell..	37	2	1	4.7	9.5	0.5
7	Denton, Neb., to McCook	34	2	1	13.3	30.0	0.3
8	Trenton to Denver.....	40	2	1	13.0	39.0	Empty*
9	Berea, Neb., to Ballantine, Mont.	79	2	1	12.33	34.0	Empty*
10	South Bend to Schuyler, and Ashland	22	2	1–2	4.5	9.0	1.0
11	Alliance, Neb., to Cody, Wyo., and Casper.....	97	2	1–2	16.25	49.0	1.0

* Cars returned empty because of no return train service.

The distribution of line supplies by line cars is the new thing on the Burlington, not the shipment of material by way freight, as that method of distribution has been used for many years. Until recently, however, it was the practice to send the material to the freight house. Since materials were shipped almost daily from the store to the forwarding freight houses, small quantities of materials were being shipped to the same receiving freight house three or four times a week and an unnecessarily large number of cars were used in the work. It was also necessary, under the old practice, to transfer much of the material received at local storehouses and local freight houses to freight houses on other divisions before it could be delivered in way freight cars. Often, three or four transfers were involved in these movements, all of which required extra handling at freight houses and extra switching costs, without improving the service. Now, the car into which material is loaded at the storehouse is the same car from which the material is unloaded at destination. This saves at least one extra handling at the freight house and effects a saving to the railroad because of the fact that freight handlers are paid on a tonnage basis.

Twenty-One Routes

When introducing the line-car program, the stores and operating departments agreed upon the number of routes over which line cars would operate and the frequency with which the cars should be shipped over each route. It was recognized that while one zone might justify the operation of a line car once a week or once every two weeks, a shipment once a month on another route would be adequate to keep the forces supplied without excessive stock. There are at present 10 routes on the Lines East and 11 routes on the Lines West.

SCHEDULED COMPANY SUPPLY CAR

ROUTE #4. Havelock, Cheney, Holdrege via Nebraska City, Beatrice, Dewitt and return via Dewitt, Beatrice and Nebraska City.

Loads at Havelock First and Third Saturday of each month.

Cars to move on the days and via the route shown.

Return car will pick up all company material, except scrap, destined Havelock.

This car must not be set out at intermediate stations unless schedule so provides.

LV	Havelock	Saturday	Extra	
LV	Lincoln	Monday	No. 136	4:15 AM
	Lancaster	"	"	
	Cheneys	"	"	
	Bennett	"	"	
	Palmyra	"	"	
	Unadilla	"	"	
	Syracuse	"	"	
	Turlington	"	"	
	Dunbar	"	"	
AR	Nebr. City	"	No. 136	7:45 AM
LV	Nebr. City	Tuesday	No. 113	10:30 AM
	Minersville	"	"	
	Barney	"	"	
	Peru	"	"	
	Woodsiding	"	"	
	Brownville	"	"	
	Nemaha	"	"	
	Stein	"	"	
	Auburn	"	"	
	Rohrs	"	"	
	Johnson	"	"	
	Graff	"	"	
	Tecumseh	"	"	
	Vesta	"	"	
	Crab Orchard	"	"	
	Filley	"	"	
	Rockford	"	"	
AR	Beatrice	"	"	6:00 PM
LV	Beatrice	Thursday	No. 96	9:10 AM
	Hoag	"	"	
AR	Dewitt	"	No. 96	9:45 AM
LV	Dewitt	"	No. 99	10:00 AM
	Swanton	"	"	
	Western	"	"	
	Tobias	"	"	
	Ohiowa	"	"	
	Strang	"	"	

Part of the Train Schedule on One Line-Car Route

Three line cars make two round trips per month over Route 1, leaving from the Aurora store on the first and fifteenth days of each month, and carrying an average of 10 tons of supplies per car for distribution to 89 stations. On Route 2, with 38 stops, the schedule calls for two round trips per month by two cars, leaving Aurora on the second and eighteenth of each month. In like manner, Route 4, with 105 stops, receives two round trips each month from three cars, leaving Aurora on the fifth and twentieth of each month, while Route 10, with 83 stops, is given only one round trip each month from one car. While some of the routes include several

branch lines, they seldom cross each other and usually permit a continuous movement of the car from one end of the route to the other.

The routes are numbered and each station along the route is assigned a store number, which is marked on the material as the orders are filled at the general store. The material is properly tagged to show the person to whom the supplies are shipped and is then loaded into the car in station order to avoid delays or mistakes when unloaded. Way bills showing the contents of the car are given to the yard office with routing instructions, and the material is unloaded by the same crews at regular stops with whatever aid is required of local forces.

The schedules list all regular stops on each route, the day of the month and the time of the day when receivers can expect the arrival of cars and their return over the route, the cars being reloaded on their return with empty oil drums, tools and other materials requiring repair, scrap iron, etc.

Where the line cars must pass over one or more routes served by other cars before reaching the division for which the material is shipped, such cars do not operate the entire distance by way freight but are handled in through trains to the distribution point, whence they move by way freight to the end of the route, and are handled in the same manner on their return; that is, by way freight to the end of the route, and thence by fast freight to the storehouse. This arrangement avoids carrying the stock, stationery supplies, track tools and similar materials at division points and has been the means of effecting substantial reductions in stores stocks by bringing the general store closer to the point of use.

The line cars are distinguished from direct store cars, so called, which are used to ship materials only between one store and another store point. Where a local store is large enough to justify the movement of a car direct to that store, however, the program of line delivery provides that all materials required by line forces at that location be shipped in the direct store car, thus expediting their shipment and avoiding delays to line cars or unnecessary handling of material at terminals.

Cars are assigned to the service which are not adapted for commercial service, yet are in suitable condition to operate in fast freight trains, as well as to protect contents in transit. These cars are handled in large measure in a pool, in that they are always available for line delivery, but can be loaded out in the order received, regardless of the route. The cars, in some instances, are equipped with special racks for package goods, adapted for the convenient loading of cans of oil, barrels, kegs and other bulky material.

In its present form, line delivery by way freight has been in effect on the Burlington for two years, where it has proved an efficient method for getting materials to the line user on time, getting back empty containers and scrap, and permitting the stores to operate with a smaller stock of materials than would otherwise be required. There is still a considerable mileage of branch line where the consumption of material is too small to justify the operation of line cars, but the service in such cases is performed for the most part by shipping the material in a line car to the nearest junction point, from which it is then shipped to destination in the regular way freight cars.

Railways Replace More Ties in 1934

Data compiled from annual reports of the railroads show sharp variations in individual records

A LARGE majority of the railroads in the United States inserted more crossties in 1934 than in 1933, thereby continuing the upward trend that was manifested by the renewals in 1933. This fact is brought out in the tabulation of crosstie renewals by railways, prepared by the Committee on Ties of the American Railway Engineering Association from statistics of the Interstate Commerce Commission. In 1934, 104 railways replaced more ties than in 1933, while 39 roads renewed fewer ties, while on one road the average renewals per mile of track maintained was the same as in 1933. This record compares with increased renewals on 75 roads in 1933 and decreased replacements on 71 roads, compared with 1932.

As in past years, the statistics illustrate the wide disparity between the renewals per mile of track on roads that have used treated ties over a considerable period of years and those whose tracks are tied largely with untreated wood. They reflect also the differing maintenance practices of individual roads. The railways inserting the largest number of ties per mile of track were the St. Louis, San Francisco & Texas, 427; the Norfolk Southern, 386; the Duluth, Winnipeg & Pacific, 375; and the Northern Alabama, 364.

The least number of ties per mile of track were applied by the Lehigh & Hudson River, which inserted 23 in 1934, per track mile, 22 in 1933, and had a five year average of 44. Next on the list is the Central of New Jersey with 33 for 1934, 45 for 1933, and a five year average of 63. The Reading is third, with 35 ties for 1934, 29 for 1933 and a five-year average of 67. However, the lowest five-year average is 29, for the Pittsburgh & Lake Erie, which inserted 41 ties in 1934 and 35 in 1933, the low five-year average being accounted for by renewals of only 4 and 5 ties per mile, respectively, in 1931 and 1932.

As is to be expected, the greatest change in the rate of renewals occurred on the railways having heavy renewal rates. Thus, the St. Louis, San Francisco & Texas increased its replacements from 278 per mile in 1933 to 427 in 1934, while the Tennessee Central decreased its renewal rate from 415 per mile to 325, a difference of 90.

While the railways as a whole have not changed their established policies with respect to the relative proportions of treated and untreated ties used, there have been some noteworthy exceptions. For example, the Baltimore & Ohio, which had increased its use of untreated ties from 1.1 per cent in 1932 to 53.3 per cent in 1933, resumed the use of treated wood in 1934 to such an extent that untreated ties represented only 4.2 per cent of the total. Other noteworthy reductions in the use of

untreated ties are as follows: Central of Georgia, from 18.3 per cent to 3.0 per cent; the Chicago, St. Paul, Minneapolis & Omaha, from 52.3 per cent to 24.7 per cent; the Great Northern, from 17.1 per cent to 8.1 per cent; and the Northern Pacific, from 23.4 per cent to 6.3 per cent. Among roads that used larger proportions of untreated ties in 1934 than in 1933, were the Delaware, Lackawanna & Western, from 5.7 per cent to 15.6 per cent; the Grand Trunk Western, from 29.4 per cent to 42.4 per cent; the Atlantic Coast Line, from 73.7 per cent to 96.0 per cent; and the Chicago, Milwaukee, St. Paul & Pacific, from 13.6 per cent to 31.4 per cent.

Statistics on Crosstie Renewals on Leading Railroads in the United States and Canada for the Calendar Year Ending December 31, 1934

All Figures Are Exclusive of Bridge and Switch Ties

Road	Number of wooden crosstie renewals per mile of maintained track						Per cent wooden crosstie renewals to all ties in tracks		Wooden ties untreated (U)		Wooden ties treated (T)		Weighted average cost per wooden crosstie	Cost of wooden crosstie renewals per thousand equated gross ton-miles
	1930	1931	1932	1933	1934	5 year average	1934	5 year average	Per cent applied	Average cost	Per cent applied	Average cost		
New England Region:														
Bangor & Aroostook	253	236	203	189	204	217	7.1	7.6	100	$0.62	.....	.....	$0.62	$0.075
Boston & Maine	236	164	64	75	118	131	4.1	4.6	1.6	0.58	98.4	$1.71	1.69	.054
Canadian National Lines in N. E.	160	87	57	87	85	95	2.8	3.1	43.7	0.72	56.3	1.83	1.35	.076
Canadian Pacific (lines in Me.)	320	262	181	170	182	223	6.3	7.7	0.4	0.36	99.6	1.39	1.39	.051
Canadian Pacific (lines in Vt.)	313	254	200	134	68	194	2.0	5.8	....	....	100	1.44	1.44	.026
Central Vermont	244	237	174	184	193	206	6.3	6.6	7.4	0.57	92.6	1.41	1.35	.071
Maine Central	244	222	184	167	192	202	6.3	6.6	48.5	0.76	51.5	1.47	1.12	.091
New York Connecting	194	293	229	131	257	221	8.0	6.9	....	....	100	1.60	1.60	.037
New York, New Haven & Hartford	253	165	121	73	62	135	2.2	4.6	....	....	100	1.37	1.37	.023
Rutland	224	210	189	147	129	180	4.3	6.0	....	....	100	1.04	1.04	.046
Great Lakes Region:														
Ann Arbor	148	114	179	130	106	135	3.6	4.5	....	....	100	1.33	1.33	.048
Cambria & Indiana	‡	‡	235	348	341	308	12.4	11.2	100	0.87	....	....	0.87	.143
Delaware & Hudson	172	111	125	139	103	130	3.4	4.3	0.4*	1.08	90.3*	2.02	2.01	.039
Delaware, Lackawanna & Western	80	76	64	53	108	76	3.7	2.6	15.6	0.34	84.4	1.34	1.18	.020
Detroit & Mackinac	202	97	126	114	101	128	3.4	4.3	64.2*	0.39	35.7*	0.92	0.58	.079
Detroit & Toledo Shore Line	112	84	88	100	83	93	2.7	3.0	....	....	97.2*	1.65	1.65	.034
Erie (Inc. Chicago & Erie)	199	173	135	106	104	143	3.6	5.0	†	0.83	100	1.39	1.39	.023
Grand Trunk Western	191	156	115	141	152	151	4.8	4.7	42.4	1.01	57.6	1.43	1.25	.059
Lehigh & Hudson River	66	54	55	22	23	44	0.9	1.7	....	....	72.3*	1.77	1.77	.009
Lehigh & New England	121	107	72	72	75	89	2.5	3.0	5.3	0.55	94.7	1.74	1.68	.046
Lehigh Valley	64	53	45	63	66	58	2.2	2.0	....	....	100	1.43	1.43	.019
Monongahela	215	145	81	131	155	145	5.4	5.1	1.4	1.00	98.6	1.80	1.79	.085
Montour	259	163	95	102	115	147	4.1	5.2	24.1	1.26	75.9	2.09	1.89	.069
New Jersey & New York	167	145	172	111	82	135	2.8	4.7	....	....	100	1.21	1.21	.023
New York Central R.R. Co. (see note)	111	91	52	52	70	75	2.5	2.6	0.2*	1.29	98.4*	1.45	1.45	.020
New York, Chicago & St. Louis	135	70	73	61	84	85	2.7	2.7	....	....	100**	1.79	1.79	.027
New York, Ontario & Western	119	116	105	90	69	100	2.4	3.5	1.3	0.51	98.7	1.21	1.20	.023
New York, Susquehanna & Western	174	125	112	113	130	131	4.5	4.5	....	....	100	1.31	1.31	.104
Pere Marquette	168	191	140	118	123	148	4.1	5.1	5.6	0.19	94.4	1.41	1.34	.050
Pittsburgh & Lake Erie	62	4	5	35	41	29	1.4	1.0	0.1	1.58	99.9	1.88	1.88	.020
Pittsburg & Shawmut	158	159	182	218	260	195	9.3	7.0	88.7	0.80	11.3	1.89	0.93	.180
Pittsburgh & West Virginia	108	117	88	114	187	123	6.5	4.2	100	1.00	....	....	1.00	.063
Pittsburg, Shawmut & Northern	185	165	140	154	183	165	6.3	5.7	51.7	0.87	48.3	1.87	1.36	.215
Wabash	177	119	134	129	130	138	4.2	4.4	0.8	0.94	99.2	1.47	1.47	.037
Central Eastern Region:														
Akron, Canton & Youngstown	250	115	155	171	264	191	9.2	6.7	100	1.26	....	....	1.26	.207
Baltimore & Ohio (see note)	123	51	47	73	81	75	2.9	2.7	4.2	1.25	95.8	1.64	1.63	.027
Bessemer & Lake Erie	231	238	171	151	241	206	7.8	6.6	0.7*	0.94	98.8*	2.09	2.08	.120
Central R. R. of New Jersey	83	82	72	45	33	63	1.2	2.2	....	....	100	1.65	1.65	.011
Chicago & Eastern Illinois	101	98	100	92	98	98	3.2	3.2	†	1.22	100	1.12	1.12	.031
Chicago & Illinois Midland	126	105	112	107	64	103	2.1	3.4	....	....	100	1.25	1.25	.017
Chicago, Indianapolis & Louisville	156	99	66	65	82	94	2.6	3.0	0.1*	0.68	96.5*	1.02	1.02	.024
Detroit, Toledo & Ironton	149	71	90	92	142	109	4.9	3.8	....	....	100	1.21	1.21	.071
Elgin, Joliet & Eastern	226	165	96	124	165	155	5.3	5.0	0.5*	0.81	98.4*	1.38	1.38	.097
Illinois Terminal	94	84	83	90	73	85	2.7	3.1	20.7*	0.71	52.7*	1.02	0.93	.040
Long Island	129	91	69	42	64	79	2.2	2.8	....	....	100	1.60	1.60	.014
Missouri-Illinois	197	221	138	183	296	207	9.6	6.7	99.6	0.57	0.4	1.01	0.57	.193
Pennsylvania R. R. (see note)	124	75	48	58	64	74	2.3	2.6	†	0.88	99.8*	1.56	1.56	.016
Penna.-Reading Seashore Lines (see note)	109	114	23	4	56	61	2.1	2.2	....	....	100	1.34	1.34	.028
Reading Company	137	105	28	29	35	67	1.3	2.4	....	....	100	1.74	1.74	.013
Staten Island Rapid Transit	73	62	54	64	69	64	2.5	2.3	....	....	100	2.54	2.54	.050
Western Maryland	206	187	116	180	219	182	7.6	6.3	22.2	0.70	77.8	1.32	1.18	.063
Wheeling & Lake Erie	171	133	46	78	63	98	2.1	3.3	2.4	0.89	97.6	1.35	1.34	.026
Pocahontas Region:														
Chesapeake & Ohio	173	127	84	92	94	114	3.1	3.7	....	....	100	1.10	1.10	.012
Norfolk & Western	176	164	114	106	90	130	2.9	4.2	....	....	78.1*	1.13	1.13	.015
Richmond, Fredericksburg & Potomac	401	295	298	298	344	327	12.0	11.4	100	0.76	....	....	0.76	.036
Virginian	342	234	169	205	208	232	6.7	7.4	29.6*	0.66	69.7*	1.24	1.06	.037

* Owing to the fact that the total number of ties inserted on some roads included some second-hand ties, ties other than wood, tie blocks, etc., the percentages of treated and untreated ties do not total 100 per cent in all cases.

** Includes second-hand ties.

† Proportion is less than 0.1 per cent.

‡ Not a Class I road prior to 1932.

NOTE:—Statement applies to Class I roads and includes consolidated data for Class I roads merged during the period 1930 to 1934, as follows:
Baltimore & Ohio—includes Buffalo, Rochester & Pittsburgh and Buffalo & Susquehanna.
New York Central—includes Evansville, Indianapolis & Terre Haute; Cincinnati Northern; Cleveland, Cincinnati, Chicago & St. Louis; Michigan Central, and Ulster & Delaware.
Pennsylvania—includes West Jersey & Seashore up to and including 1932.
Penna.-Reading Seashore Lines—includes Atlantic City and West Jersey & Seashore; organized as Class I road in 1933. Figures shown are for Atlantic City R. R. only, 1930-1932 inclusive.
Gulf, Mobile & Northern—includes New Orleans Great Northern.
Duluth, Missabe & Northern—includes Duluth & Iron Range.
Atchison, Topeka & Santa Fe—includes Panhandle & Santa Fe and Gulf, Colorado & Santa Fe.
Canadian National Railways—includes lines in New England, Grand Trunk Western, and Duluth, Winnipeg & Pacific.
Canadian Pacific—includes all lines.
Kansas City Southern—includes Texarkana & Fort Smith.

Statistics on Crosstie Renewals on Leading Railroads in the United States and Canada for the Calendar Year Ending December 31, 1934—Continued

All Figures Are Exclusive of Bridge and Switch Ties

Road	Number of wooden crosstie renewals per mile of maintained track						Per cent wooden crosstie renewals to all ties in tracks		Wooden ties untreated (U)		Wooden ties treated (T)		Weighted average cost per wooden crosstie	Cost of wooden crosstie renewals per thousand equated gross ton-miles
	1930	1931	1932	1933	1934	5 year average	1934	5 year average	Per cent applied	Average cost	Per cent applied	Average cost		
Southern Region:														
Alabama Great Southern	342	343	235	213	275	282	8.9	9.1	20.5	$1.00	81.5	1.27	$1.22	$0.082
Atlanta & West Point	198	160	108	176	151	159	5.0	5.6	0.2	0.69	99.8	1.49	1.49	
Western Ry. of Alabama	268	171	67	168	120	159	4.0	5.4	0.9	0.79	99.1	1.45	1.44	.059
Atlanta, Birmingham & Coast	243	222	179	126	151	184	5.2	6.4	100	0.72	†	1.18	0.72	.065
Atlantic Coast Line	218	210	186	152	145	182	5.0	6.3	96.0	0.77	4.0	1.02	0.78	.044
Central of Georgia	144	143	109	116	121	127	4.3	4.5	3.0	0.55	97.0	0.71	0.71	.034
Charleston & Western Carolina	275	237	205	197	163	215	5.6	7.6	100	0.98	....	....	0.98	.103
Cincinnati, New Orleans & Tex. Pac.	300	281	185	157	163	217	5.2	7.0	0.2	0.47	99.8	1.44	1.44	.034
Clinchfield	477	399	376	372	314	388	10.3	12.7	77.5	0.72	22.5	1.36	0.87	.053
Columbus & Greenville	415	152	229	219	220	247	6.9	7.8	30.5	0.57	69.5	1.04	0.90	.130
Florida East Coast	36	34	93	172	135	94	4.7	3.3	100	0.75	....	....	0.75	.045
Georgia R. R.	250	240	178	194	133	199	4.3	6.6	79.4	0.98	20.6	1.44	1.07	.049
Georgia & Florida	216	256	155	201	266	219	9.8	8.1	100	0.51	....	....	0.51	.177
Georgia, Southern & Florida	247	256	153	83	99	168	3.2	5.4	100	0.69	....	....	0.69	.031
Gulf & Ship Island	320	288	30	135	171	189	5.6	6.1	95.4*	0.44	4.3*	0.94	0.46	.061
Gulf, Mobile & Northern (see note)	220	142	136	119	157	155	5.0	4.9	20.4*	0.46	78.2*	0.84	0.76	.060
Illinois Central	161	166	79	95	135	127	4.4	4.2	17.1*	0.51	82.5*	0.99	0.90	
Yazoo & Mississippi Valley	237	236	70	93	123	152	4.0	4.9	35.6*	0.52	64.3*	1.01	0.83	.028
Louisville & Nashville	200	168	103	109	110	138	3.8	4.8	8.6	0.98	91.4	1.25	1.22	.031
Mississippi Central	204	167	96	106	155	146	4.9	4.6	9.8	0.43	90.2	1.02	0.96	.137
Mobile & Ohio	361	287	272	230	317	293	10.0	9.2	100	0.68	....	....	0.68	.068
Nashville, Chattanooga & St. Louis	296	319	243	229	173	252	5.9	8.5	6.5	0.43	93.5	1.04	1.00	.052
New Orleans & Northeastern	273	248	222	185	196	225	6.3	7.3	31.5	0.97	68.5	1.22	1.14	.061
Norfolk Southern	306	228	163	284	386	273	13.6	9.6	100	0.58	....	....	0.58	.180
Northern Alabama	385	351	325	375	364	360	11.5	11.4	100	0.83	....	....	0.83	.200
Seaboard Air Line	227	258	215	204	215	224	7.7	7.4	54.5	0.74	45.5	0.86	0.80	.064
Southern Railway	351	336	298	260	282	305	9.0	9.7	82.1	0.90	17.9	1.28	0.97	.074
Tennessee Central	310	258	246	415	325	311	10.4	9.9	92.6	0.67	7.4	1.74	0.75	.117
Northwestern Region:														
Chicago & North Western	173	136	108	100	116	127	3.9	4.3	6.8	0.46	93.2	1.00	0.96	.041
Chicago Great Western	220	243	247	179	194	217	6.7	7.4	26.1	0.89	73.9	1.15	1.08	.051
Chicago, Milwaukee, St. Paul & Pacific	214	185	162	133	184	176	6.2	6.0	31.4	0.42	68.6	1.14	0.91	.062
Chicago, St. Paul, Minpls. & Omaha	223	255	201	152	164	199	5.5	6.7	24.7	0.42	75.3	1.02	0.87	.048
Duluth, Missabe & Northern (see note)	174	160	11	38	62	89	2.1	3.0	23.0	0.60	77.0	1.75	1.49	.064
Duluth, South Shore & Atlantic	235	214	157	155	161	184	5.6	6.3	100	0.52	†	1.42	0.52	.069
Duluth, Winnipeg & Pacific	266	321	246	270	375	296	12.5	9.9	100	0.47	....	....	0.47	.114
Great Northern	190	168	140	40	110	130	3.4	4.1	8.1*	0.40	90.2*	1.11	1.05	.042
Green Bay & Western	296	300	268	328	340	306	12.1	10.9	100	0.62	....	....	0.62	.178
Lake Superior & Ishpeming	230	150	105	148	186	164	6.2	5.5	100	0.55	....	....	0.55	.178
Minneapolis & St. Louis	122	102	101	88	104	103	3.4	3.4	51.3	0.71	48.7	1.15	0.92	.057
Minneapolis, St. Paul & S. S. Marie	222	173	164	169	158	177	5.4	6.1	50.8	0.54	49.2	1.12	0.83	.070
Northern Pacific	124	103	101	97	82	101	218	3.5	6.3	0.47	93.7	1.12	1.08	.037
Oregon-Washington R. R. & Nav. Co.	167	98	65	84	119	107	4.1	3.7	2.1	0.44	97.9	0.97	0.96	.046
Spokane International	348	326	367	263	313	323	11.1	11.5	100	0.44	....	....	0.44	.168
Spokane, Portland & Seattle	294	216	174	154	142	196	4.7	6.6	99.1	0.47	0.9	1.15	0.48	.022
Central Western Region:														
Alton R. R.	254	241	213	203	263	235	8.7	7.9	92.2*	1.07	6.2*	1.72	1.11	.079
Atchison, Topeka & Santa Fe (see note)	162	111	78	77	97	105	3.2	3.4	†	0.65	100	1.09	1.08	.033
Chicago, Burlington & Quincy	151	134	106	64	91	109	2.9	3.5	....	....	90.0*	1.20	1.20	.035
Chicago, Rock Island & Pacific	128	106	38	46	61	76	2.0	2.5	0.2	0.41	99.8	1.02	1.02	
Chicago, Rock Island & Gulf	185	98	44	55	70	90	2.2	3.0	....	....	88.6*	1.61	1.61	.023
Colorado & Southern	140	116	112	110	144	124	4.7	4.1	44.8*	0.42	48.7	1.17	0.86	.062
Denver & Rio Grande Western	175	162	130	129	167	153	5.4	4.9	0.5*	0.32	77.1*	1.01	1.01	.067
Denver & Salt Lake	138	130	123	201	191	157	6.2	5.1	73.9	0.75	26.1	0.96	0.81	.102
Fort Worth & Denver City	178	90	68	31	33	80	1.1	2.6	....	....	100	1.08	1.08	.016
Los Angeles & Salt Lake	132	124	112	137	166	134	5.9	4.8	1.9	0.89	98.1	1.30	1.29	.048
Nevada Northern	169	133	134	117	129	136	4.5	4.8	100	0.75	....	....	0.75	.220
Northwestern Pacific	270	210	106	76	136	160	4.6	5.4	99.3	0.53	0.7	0.87	0.54	.038
Oregon Short Line	151	111	59	75	108	101	3.9	3.6	0.7	0.67	99.3	1.17	1.16	.046
St. Joseph & Grand Island	126	124	69	97	165	116	5.6	3.9	0.8	0.55	99.2	1.77	1.76	.074
San Diego & Arizona Eastern	132	90	84	113	146	113	5.0	3.9	100	0.78	....	....	0.78	.139
Southern Pacific Co.-Pac. Lines	164	137	97	57	65	104	2.2	3.5	10.2*	0.61	71.8*	1.07	1.01	.016
Toledo, Peoria & Western	155	166	155	212	256	189	8.1	6.0	19.8	0.79	80.2	1.31	1.21	.136
Union Pacific	123	108	85	86	126	106	4.5	3.7	†	0.95	100	1.28	1.28	.025
Utah Railway	234	187	110	94	166	158	6.4	6.1	55.1	0.69	44.9	1.77	1.17	.095
Western Pacific	338	261	199	277	274	270	9.4	9.2	100	0.63	†	1.17	0.63	.041
Southwestern Region:														
Burlington-Rock Island	400	145	22	27	56	130	1.8	4.2	....	....	100	0.68	0.68	.024
Fort Smith & Western	311	241	254	203	287	259	9.2	8.3	100	0.50	....	....	0.50	.135
Fort Worth & Rio Grande	153	118	156	228	144	160	4.6	5.0	98.9	0.81	1.1	1.08	0.82	.132
Gulf Coast Lines:														
Beaumont, Sour Lake & Western	216	115	58	76	110	115	3.7	3.9	....	....	100	0.99	0.99	
New Orleans, Texas & Mexico	224	126	93	113	104	132	3.4	4.3	....	....	100	1.01	1.01	
St. Louis, Brownsville & Mexico	158	60	28	30	45	64	1.5	2.1	....	....	100	0.91	0.91	.024
San Antonio, Uvalde & Gulf	240	225	132	94	77	154	2.7	5.3	....	....	100	1.00	1.00	
International-Great Northern	204	167	93	123	112	140	3.7	4.7	0.1	0.77	99.9	0.86	0.86	.025
Kansas City Southern (see note)	165	147	143	121	109	137	3.4	4.4	†	0.47	100	0.91	0.91	.035
Kansas, Oklahoma & Gulf	117	107	92	137	208	132	6.5	4.2	....	....	100	0.93	0.93	.100
Louisiana & Arkansas	339	253	184	251	251	256	7.9	8.1	44.5	0.49	55.5	0.74	0.63	.080
Louisiana, Arkansas & Texas	374	309	242	416	354	339	11.7	10.7	99.8	0.46	0.2	1.20	0.46	.120
Midland Valley	165	112	76	94	97	109	3.0	3.4	....	....	100	0.99	0.99	.109
Missouri & North Arkansas	250	240	178	216	327	242	10.5	7.9	100	0.47	....	....	0.47	.143
Missouri-Kansas-Texas Lines	162	93	120	99	127	120	4.0	3.8	15.8	0.66	84.2	1.16	1.08	.043
Missouri Pacific	217	164	96	164	169	162	5.4	5.2	13.9	0.52	86.1	0.95	0.89	.037
Oklahoma City-Ada-Atoka	404	108	97	42	119	154	3.8	4.9	80.0	0.54	20.0	1.27	0.69	.154
St. Louis-San Francisco	168	124	167	204	202	173	6.4	5.5	5.1	0.55	94.9	1.00	0.98	.075
St. Louis, San Francisco & Texas	149	133	164	278	427	230	13.5	7.3	73.3	0.81	26.7	1.16	0.90	.330
St. Louis Southwestern Lines	207	92	78	57	72	101	2.3	3.2	0.4*	0.24	99.4*	1.19	1.19	.029
Texas & New Orleans	173	139	99	87	121	124	4.5	4.6	11.7	0.92	88.3	0.67	0.70	.034
Texas & Pacific	170	107	54	69	78	96	2.7	3.2	†	0.31	100	0.82	0.82	.016
Texas Mexican	269	184	152	124	152	176	5.3	6.1	....	....	100	1.06	1.06	.154
Wichita Falls & Southern	247	224	176	158	172	195	5.2	5.9	....	....	100	0.83	0.83	.249
Canadian Roads:														
Canadian National (see note)	...	...	...	164	198	186	6.9	6.5	40.9	0.48	59.1	1.27	0.95	.092
Canadian Pacific (see note)	220	210	162	161	166	184	5.9	6.5	46.8	0.49	53.2	1.09	0.81	.060
Temiskaming & Nor. Ontario	...	...	...	216	245	235	8.6	8.1	100	0.69	....	....	0.69	.113

NEWS

Rail Merger for Canada Again Opposed by Manion

Minister of Railways and Canals reasserts opposition of Conservatives to proposal

Every little while in the present federal election campaign in Canada some Liberal, frequently the leader of that party, Rt. Hon. W. L. Mackenzie King, reasserts his stand against amalgamation of the Canadian Pacific with the Canadian National and, sometimes openly, often impliedly, links the Conservatives, of whom Premier Bennett is the head, with a move for unifying the two roads. This forces the present government party to again declare itself against amalgamation as did Dr. Robert J. Manion, Minister of Railways and Canals, at a meeting in the province of Quebec last week. It may be recalled, too, that more than once lately, pending the first campaign speech of Premier Bennett to be delivered over a nation-wide radio hook-up on September 6, it has been stated the Conservative leader would declare himself ready to favor a national government one of the tasks of which would be to solve the railway problem through unification.

Dr. Manion spoke, in part, as follows:

"Between the years 1920 and 1930, he [Mr. King, who was then Premier] permitted the C. N. R. to spend money like water. He allowed a debt increase of 500 millions of dollars in nine years. In 1929 alone he permitted the management to commit the country to expenditures of 250 millions. This alone equalled two-thirds of Canada's National debt before the war."

At this point, Dr. Manion enumerated the manner in which some of the money was spent. Costly and unnecessary hotels were built, ships were purchased, a railway was bought and expensive branch-lines constructed. To crown all, construction was commenced on a 50-million dollar railway terminal in Montreal.

"Could any of you railway men gain anything by the spending of this money?" Dr. Manion asked. "Not at all. As a matter of fact it endangered your jobs and the financial structure of the country.

"Mr. King allowed the payment of huge salaries to those who did not need them. We have cut the headquarters salaries by $2,000,000 a year and the C. N. R. today is more efficiently and economically operated than at any time in its stormy history.

"I heard there today that there are some who are such traitors as to favor the C. P. R. over the C. N. R. If I did such a thing I would not consider myself fit to stand before you tonight.

"The best proof that the C. N. R. is not being sacrificed to the C. P. R. is the fact that, in the first five months of the year, C. N. R. earnings are $2,000,000 ahead of its earnings last year, while the C. P. R. was $250,000 behind. If the C. N. R. were being betrayed, it would not be in its present condition.

"The world business is down. When world trade goes down railway traffic goes down proportionately."

Dr. Manion said in explaining unemployment among railwaymen: "We are doing half the business we were in 1928 and when we are doing half the business we cannot employ as many men," he pointed out.

Here Dr. Manion touched upon the railway problem in general. Canada, he said, had too many trans-continental railways. When the Great War broke out the old Grand Trunk and Canadian Northern lines got into financial difficulties and the government had to take over the railways to save the credit of the country. "Probably," Dr. Manion stated, "a mistake was made in not allowing a bankruptcy and the dropping of millions in bonds.

"Thanks to the recommendations of the Royal Commission we appointed to look into transportation matters, the C. N. R. is not troubled with politics," Dr. Manion said. "I myself have nothing to do with the hiring and firing. I cannot interfere. As it is, the C. N. R. is in a position to benefit when traffic picks up."

Net for Seven Months a 1.69 Per Cent Return

$221,664,055 compares with $262,308,288 or 1.99 per cent for same period in 1934

The Class I railroads in the first seven months of 1935 had a net railway operating income of $221,664,055, which was at the annual rate of return of 1.69 per cent on their property investment, according to reports filed by the carriers with the Bureau of Railway Economics of the Association of American Railroads. In the first seven months of 1934, their net railway operating income was $262,308,288 or 1.99 per cent on their property investment.

Gross operating revenues for the seven months totaled $1,910,943,435 compared with $1,905,907,005 for the same period in 1934, an increase of 0.3 per cent. Operating expenses were $1,477,393,366 compared with $1,420,779,947 in 1934, an increase of 4.0 per cent. In the period the roads paid $142,073,012 in taxes compared with $147,832,345 in the same period in 1934 or a reduction of 3.9 per cent. For the month of July alone, the railroad tax bill totaled to $20,035,452, a reduction of $1,045,135 or five per cent under July, 1934.

Forty-one class I railroads failed to earn operating expenses and taxes in the first seven months of 1935, of which nine were in the Eastern district, nine in the Southern and 23 in the Western district.

Class I railroads for July had a net railway operating income of $26,851,397, which, for that month, was at the annual rate of return of 1.16 per cent on their property investment. In July, 1934, their net railway operating income was $35,441,265 or 1.53 per cent.

Gross operating revenues for July amounted to $275,349,115 compared with $276,009,904 in July, 1934, a decrease of

CLASS I RAILROADS—UNITED STATES

Month of July

	1935	1934	Per Cent of Increase
Total operating revenues	$275,349,115	$276,009,904	0.2 Dec.
Total operating expenses	217,930,698	208,492,883	4.5
Taxes	20,035,452	21,080,587	5.0 Dec.
Net railway operating income	26,851,397	35,441,265	24.2 Dec.
Operating ratio—per cent	79.15	75.54	
Rate of return on property investment	1.16%	1.53%	
Seven months ended July 31			
Total operating revenues	$1,910,943,435	$1,905,907,005	0.3
Total operating expenses	1,477,393,366	1,420,779,947	4.0
Taxes	142,073,012	147,832,345	3.9 Dec.
Net railway operating income	221,664,055	262,308,288	15.5 Dec.
Operating ratio—per cent	77.31	74.55	
Rate of return on property investment	1.69%	1.99%	

Dec. = decrease.

Caskie a Member of Motor Division

Commissioner M. M. Caskie has been made a member of the Motor Carrier Division of the Interstate Commerce Commission, it was announced late last week. The other members of the division are Commissioners Eastman and Lee. Commissioner McManamy was originally assigned to that division, but withdrew in order to give Mr. Caskie a place on it.

0.2 per cent. Operating expenses in July totaled $217,930,698 compared with $208,492,883 in the same month in 1934, or an increase of 4.5 per cent.

In the Eastern district in the seven months the roads had a net railway operating income of $159,116,290, which was at the annual rate of return of 2.42 per cent on their property investment. For the same period in 1934, their net railway operating income was $166,761,244 or 2.53 per cent on their property investment. Gross operating revenues of the Class I railroads in the Eastern district for the first seven months in 1935 totaled $990,585,590, a decrease of two tenths of one per cent, compared with 1934, while operating expenses totaled $725,592,250, an increase of 1.6 per cent above the same period in 1934. In July net railway operating income of the Eastern roads was $16,549,543, compared with $17,970,660 in July, 1934.

In the Southern district for the first seven months of 1935 the railroads had a net railway operating income of $26,428,191, which was at the annual rate of return of 1.47 per cent. For the same period in 1934, their net railway operating income amounted to $33,612,145, which was at the annual rate of return of 1.86 per cent. Gross operating revenues in the Southern district for the first seven months amounted to $245,008,957, an increase of one per cent compared with the same period in 1934, while operating expenses totaled $195,020,407, an increase of six per cent. In July the Southern roads had a net railway operating income of $2,003,161 compared with $1,827,668 in July, 1934.

In the Western district for the first seven months the Class I roads had a net railway operating income of $36,119,574, which was at the annual rate of return of 0.77 per cent. For the same seven months in 1934, the railroads in that district had a net railway operating income of $61,934,899, which was at the annual rate of return of 1.30 per cent. Gross operating revenues for the seven months amounted to $675,348,888, an increase of six tenths of one per cent above the same period in 1934, while operating expenses totaled $556,780,709, an increase of 6.5 per cent compared with the same period in 1934. In July the Western lines reported a net railway operating income of $8,298,693 compared with $15,642,937 for the same roads in July, 1934.

Express Rates Reduced in Canada

Striking reductions in rates on long-haul heavy express shipments became effective over the lines of all railway express companies in Canada on September 2. The new rates represent a reduction of more than 20 per cent.

Club Meetings

The North West Car Men's Association (St. Paul) will hold its next meeting at the Y. M. C. A. building, Minnesota Transfer, on Monday evening, September 9. F. J. Swanson, Chicago, Milwaukee, St. Paul & Pacific, will speak on Reclamation of Materials.

The Canadian Railway Club will hold its next meeting at the Windsor Hotel, Montreal, on Monday evening, September 9. R. G. Perry, passenger traffic manager of the Provincial Transport Company, will speak on development of the motor coach industry. The secretary of this club is C. R. Crook, 2271 Wilson Avenue, Montreal.

The Car Foreman's Association of Omaha will hold its next meeting on Thursday, September 12, at 12:15 p. m. in the Railroad Y. M. C. A. The secretary of this club is J. R. Leach, car department, Chicago Great Western, Council Bluffs, Iowa.

Chesapeake Bay Fares Reduced

The Pennsylvania has reduced fares on its steamer line across Chesapeake Bay. The reductions are: Cape Charles, Va., and Norfolk, from $1.30 to 90 cents; Cape Charles and Old Point Comfort, from 87 cents to 50 cents; Old Point Comfort to Norfolk, 44 cents to 40 cents.

I. C. C. Postpones Power Reverse Gear Hearings

Ulysses Butler, chief examiner of the Interstate Commerce Commission, announced last week that the hearings originally scheduled for September 17 in the Power Reverse Gear Case have been postponed until October 22.

Allegheny Board Meeting

The thirtieth regular meeting of the Allegheny Regional Advisory Board will be held in Wheeling, W. Va., on September 12 at the Fort Henry Club. Hon. J. J. Cornwell, former governor of West Virginia and now general counsel of the Baltimore & Ohio will be the guest speaker at a joint luncheon with the executive and contact committees.

Injunction Granted for Car Spotting Allowance

The Federal District Court in Chicago on August 28 granted an interlocutory injunction against the Federal Government, the Interstate Commerce Commission and the Indiana Harbor Belt which forces the Indiana Harbor Belt to make car-spotting allowances to the Inland Steel Company. Tariffs providing for the car-spotting allowance, which were to have been canceled on September 3, will be restored during the pendency of the case.

Railroad Suffers in Florida Hurricane

The disasters due to the Florida hurricane, reported in the newspapers of September 4 and 5 include serious damage to the Florida East Coast Railway, but only a very few details have been published as this issue goes to press. Fragmentary and unofficial news items, partly coming from men surveying the scenes from an airplane, include the following:

Matecumbe Key: Rescue train wrecked; crew saved.

Key West: Associated Press finds railway track (Florida East Coast) twisted and broken; miles of track lifted from roadbed. One statement says train wreck was due to failure of bridge from Matecumbe to the next key.

Islamorada (74 miles from Miami): Station agent estimates several hundred persons dead, only 25 residents saved. This estimate of total dead may include veterans on lower Matecumbe where two construction camps occupied by war veterans were demolished. Many persons crushed in collapse of hotel used as hospital.

$5,000,000 Allotted for Florida Canal Project

President Roosevelt has approved an allotment of $5,000,000 of works program funds for preliminary work on the proposed ship canal across Florida to connect the Atlantic ocean and the Gulf of Mexico. The President had declined to approve the entire project, the estimated cost of which is $146,000,000, on the ground that it was too large a project to approve without authorization from Congress, but he has approved the preliminary allotment on the ground that it would be used mainly on the channel of the St. John's river which is now being used.

P. W. A. Railroad Loans

Of the $199,708,000 that has been allotted by the Public Works Administration to railroads, $25,779,326 was for rail and fastenings and the balance of $173,928,674 was for other purposes, principally equipment construction or rehabilitation. Up to August 1, 1935, the Public Works Administration had actually advanced $181,366,500 of the allotted sums. The P. W. A. sold to the Reconstruction Finance Corporation $67,276,500 of the securities for the railroad loans, of which $18,612,000 were subsequently resold to the public, $5,076,000 redeemed and $43,488,500 were held on August 1. The R. F. C. sold $15,282,000 of the Pennsylvania loan on August 15, at a premium of $1,169,837.

Chicago-Twin Cities Trains Handle Record Business

The high-speed trains of the Chicago, Burlington & Quincy, the Chicago, Milwaukee, St. Paul & Pacific and the Chicago & North Western handled a record number of passengers between Chicago and the Twin Cities over the Labor Day weekend, necessitating the operation of extra sections. The twin Zephyrs of the Burlington were operated to capacity on each run, and on August 31 a steam train was operated as a second section southbound, carrying 143 passengers. The Hiawatha of the Milwaukee was operated in two sections, both north and southbound, on August 30 and 31 and September 1 and 2, while on August 31 it was operated northbound in three sections. The five sections on August 31 carried 1603 on-and-off passengers. The Four Hundred of the North Western was operated in two sections, northbound on August 30 and September 2, while extra cars were added to all sections on each day from August 29 to September 2.

Canadian Roads in July

The Canadian Pacific in July had net operating revenue totaling $1,526,181, as compared with $1,511,481 for July of last year, representing an increase of $14,699. Gross for July at $11,129,567 showed an increase of $412,713, while operating ex-

penses at $9,603,385 showed an increase of $398,013.

For the first seven months, the company's net operating revenues totaled $7,588,200, which contrasts with $9,565,894 for the same period of 1934, a decrease of $1,977,694. Gross for the seven-month period at $67,658,191 showed a decrease of $269,341, while operating expenses at $60,069,991 showed an increase of $1,708,352.

Operating revenues of the Canadian National for the first seven months increased $1,539,692 over the corresponding period of 1934.

Seven months' revenues were $95,029,714 compared with $93,490,022 for the same period in 1934. Net operating revenue, however, totaled $3,300,445, a decrease of $1,766,540 under the $5,066,985 earned in 1934. Operating expenses rose $3,306,232—from $88,423,037 to $91,729,269.

Operating revenues for July were $14,886,392, an increase of $893,117 over July, 1934. Operating expenses at $13,765,011 rose $460,181 over July, 1934, leaving net operating revenue of $1,121,381, a gain of $432,936 against $688,445 in July last year.

Wabash Employees Postpone Strike

A strike of approximately 4,500 train and engine service employees of the Wabash and the Ann Arbor, which was to have taken place on August 31, was called off on August 30, when both sides agreed to place their difference before the United States Mediation Board. The order to strike, which was to involve members of the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, the Order of Railway Conductors, and the Brotherhood of Railroad Trainmen, was issued following a vote taken on August 10.

The strike vote was the outcome of charges by the unions that the railroads reduced rates of pay in 1933 without first negotiating with the employees and had failed to place in effect all of the conditions of the award handed down by the national adjustment board. The wage cut, according to union representatives, was announced arbitrarily by the receivership management early in 1933 without preliminary negotiations with accredited representatives of employees, as required by mutual agreement and by the national railway labor act. Numerous attempts to settle the dispute failed, and employees voted to walk out unless the award of the adjustment board in favor of the employees should be made effective in its entirety by the railroads. In rejecting certain rulings in the board's decision, the railroad suggested that the disputes be referred to the courts. This the unions declined to do.

P. R. R. Establishes C. O. D. Service

A "cash on delivery" service, to supplement and extend the scope of its collection and delivery plan for the door-to-door transportation of l.c.l. freight, was established on September 1 by the Pennsylvania. While the new feature will be available to all patrons, it is believed by the railroad management that it will be particularly valuable to medium sized and small business establishments. It is expected to provide a means by which merchants can greatly extend their area of sales, without furnishing additional facilities of their own and without incurring risk of loss in shipping to distant consignees with whom they have no established credit relations.

The invoice price of the merchandise will be collected by the railroad representative, upon delivery of the goods to the purchaser's door, and remittance will be made to the shipper by railroad draft, the company assuming entire responsibility. A sliding scale of charges is provided for collecting and remitting the money.

Every effort has been made to simplify the transaction and there is complete absence of "red tape," the announcement said. Only a few brief notations upon the bill-of-lading are required, and the shipper deals with a single individual, the railroad freight agent at his own station.

The new service will be available at all of the approximately 2,000 points on the Pennsylvania at which the door-to-door plan is in effect. In addition it will be provided to and from a large number of points on other railroads in the territory east of the Mississippi and north of the Potomac and Ohio rivers, including New England, which have joined in the service.

The "C. O. D." feature, it is anticipated, will add materially to the attractiveness of the door-to-door plan and further increase the extent of its operation. Since establishment of the plan, on December 1, 1933, the traffic handled under it has progressively grown until it now accounts for about 25 per cent of the Pennsylvania's entire l.c.l. traffic, having increased to about 3,000,000 shipments annually.

Pension, Coal and Reorganization Bills Signed

Since the adjournment of Congress, President Roosevelt has signed several bills affecting the railways which were enacted during the last days of the session. These include the two railroad retirement bills, the Snyder-Guffey coal bill and the amended railroad bankruptcy bill.

The retirement bills are H. R. 8651, which sets up the retirement plan, and H. R. 8652, which levies a tax on railroads and their employees to cover the cost of the plan; they are designed as a substitute for the Railroad Retirement Act, 1934, which was declared unconstitutional by the Supreme Court. Under the provisions of H. R. 8651 a commission, consisting of three members of the House, three members of the Senate and three outside members to be appointed by the President, is to be named to study the railroad retirement question. The House and Senate members were appointed last week and are as follows: Representatives Crosser, Ohio; Vinson, Kentucky; and Michener, Michigan; Senators Brown, New Hampshire; Murray, Montana; and Capper, Kansas. The President has not announced the appointment of the three remaining members.

The Snyder-Guffey bill (H. R. 9100) is designed to set up a plan for the regulation of the bituminous coal industry. It was signed by the President on August 30.

The Railroad bankruptcy bill (H. R. 8587) which amends section 77 of the federal bankruptcy law in its relation to railroad reorganizations was approved by the President on August 28.

John E. Bleekman Dies

John E. Bleekman, consulting engineer identified with many important railway projects, died on August 23, at his home in East Elmhurst, Queens, New York. Mr. Bleekman was born on August 22, 1866, in Little Falls, N. Y., and was educated in the public schools of Ft. Wayne, Ind., later taking a technical course in the University of Chicago. Shortly after leaving college he became secretary to the general manager of the Wabash at St. Louis, and later held the same position on the Santa Fe. In 1893 Mr. Bleekman became connected with the California Fruit Growers' Association, in direct charge of its problem of transporting fruit to the Eastern markets. Six years later he became managing director of the John Jacob Astor Syndicate, then seeking certain concessions in Central America for the construction of railroads. In 1905 he secured control of a number of small railroads in the South, and with a few hundred miles of new construction brought them into a consolidation known as the Gulf & Florida. In 1908, he became associated with A. S. White, then of Cleveland, and became interested in the gas business and in the promotion of a new Union station for the city of Cincinnati. In later years, Mr. Bleekman maintained an office in New York City, and, as a consulting engineer, interested himself in many railroad projects, including a belt line railroad at Columbus, Ohio, the Montreal Cutoff, a new Union Station for Los Angeles, Calif., and the re-organization of the Seaboard.

Long Island Files Tariffs for Increased Suburban Fares

The Long Island on August 31 filed with the New York state authorities proposed increases in suburban season ticket fares, to go into effect October 1, the rates shown being from 15 to 20 per cent above present rates on weekly, monthly and school tickets. At the same time an argument designed to justify the proposed increases was printed in the newspapers as an advertisement. In this it is stated that all of the eight railroads serving New York City have made authorized increases in suburban fares since 1918, and five of the roads have made increases of from 15 to 40 per cent in the last ten years; and a table is published showing that on two of the roads, the New York, New Haven & Hartford and the Delaware, Lackawanna & Western, commutation fares are at present considerably higher, for comparable distances, than on the Long Island.

A comparison of present and proposed Long Island fares shows, for example, between New York and Jamaica, 11 miles, $8.80 increased to $10.15; New York and Garden City, 20 miles, $10.56 increased to $12.70; Oyster Bay, 35 miles, $13.04 increased to $15.65.

The advertisement states that the Long Island has refrained as long as possible from making this proposal, but that now increased revenue is necessary to enable

Continued on next left-hand page

MODERN POWER

INCREASES EARNINGS LOWERS COSTS

NET TONS per mile of road per day is the measure of the effectiveness of the transportation plant.

MODERN STEAM LOCOMOTIVES, while keeping within all present track and bridge limitations are capable of providing an increase of 25% — 30% in ton-mile capacity compared with locomotives built ten or more years ago.

UTILIZATION of modern steam power assures maximum net returns from the entire transportation plant.

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

the company to make both ends meet. In contrast with conditions on other roads, the Long Island has much less income from freight than from passenger traffic and passenger transportation is the least profitable of railroad service; moreover, the commutation fares represent the least profitable part of the passenger revenue. The company's total revenues in 1933 and 1934 were each year less than in any year since 1918. In the last five years total passenger revenues have fallen off 38 per cent; freight revenues, 40 per cent. In 1935 so far, revenues have fallen short of operating expenses and fixed charges by $717,000. Costs and taxes have gone up.

In the new tariffs the 20-trip and 50-trip family tickets are left out, but 12-trip weekly tickets, recently introduced, will be continued, as will also the unrestricted 10-trip tickets good for bearer.

Numerous associations of passengers at once presented protests to the state commissions and the commissions have suspended the rates. Public hearings will be ordered and, judging by past experiences, will be long continued. Within the limits of New York City, the State Transit Commission has jurisdiction, so that hearings will doubtless be held jointly by this and the State Public Service Commission.

Funds Sought for Motor Carrier Regulation and Pension Board

The situation created by the failure of Congress to pass the third deficiency appropriation bill was discussed last week by the President with J. R. McCarl, comptroller general, and with Congressional leaders, with a view of determining how funds can be obtained in order to enable the President to set up organizations authorized in legislation passed at the recent session. Included in the deficiency bill, which was filibustered to death by Senator Huey Long of Louisiana, were appropriations of $1,250,000, of $600,000 and of $60,000, respectively, for the Interstate Commerce Commission's Motor Carrier Division, the Railroad Retirement Board and the pension investigating commission.

In the case of the Motor Carrier Division, the White House announced that the I. C. C. has adequate funds from appropriations already made from which money could be diverted temporarily for the use of the Motor Carrier Division in order to enable it to organize, providing an appropriation bill can be passed shortly after Congress reconvenes in January, so the commission can be reimbursed.

No announcement has been made as to how funds can be provided for the Railroad Retirement Board and the investigating commission. In this connection, however, the President, in rejecting an offer of a $1,000,000 one-year loan from the Brotherhood of Locomotive Firemen and Enginemen, stated that "we hope to work out a plan which will cover all preliminaries necessary to begin the far-reaching activities authorized by the act." The President's telegram rejecting the loan was addressed to D. B. Robertson, international president of the brotherhood, and read as follows:

"I acknowledge and deeply appreciate your telegram of Aug. 29 proffering a loan of one million dollars to the government to initiate the program contemplated by the Railroad Retirement Act.

"However, the laws governing the receipt and disbursement of public funds and the incurring of government obligations preclude acceptance of your generous and patriotic suggestion. At the same time I am sure you will be pleased to know that we hope to work out a plan which will cover all preliminaries necessary to begin the far-reaching activities authorized by the act. I believe that Congress will promptly provide sufficient funds when it convenes in January next. Please accept and extend to your associates my thanks for your thoughtful telegram."

Meetings & Conventions

The following list gives names of secretaries, date of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—T. L. Burton, Room 3400 Empire State Bldg., New York, N. Y.

ALLIED RAILWAY SUPPLY ASSOCIATION.—F. W. Venton, Crane Company, 836 S. Michigan Ave., Chicago, Ill. To meet with Air Brake Association, Car Department Officers' Association, International Railroad Master Blacksmiths' Association, International Railway Fuel Association, International Railway General Foreman's Association, Master Boiler Makers' Association and the Traveling Engineers' Association.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, F. T. R., M. & O. R. R., Chicago, Ill.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS. — E. L. Duncan, 816 McCormick Bldg., Chicago, Ill. Annual meeting, September 17-19, 1935, Royal York Hotel, Toronto, Canada.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York, N. Y. Annual meeting, October 8-9, 1935, Hotel Alms, Cincinnati, Ohio.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Union Station, St. Louis, Mo.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill. Annual meeting, January 17-18, 1936.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill. Annual meeting, October 15-17, 1935, Clift Hotel, San Francisco, Calif.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, 319 N. Waller Ave., Chicago, Ill. Annual meeting, October 15-17, 1935, Hotel Stevens, Chicago, Ill. Exhibit by Bridge and Building Supply Men's Association.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION. —E. H. Gurton, Mgr., Land Settlement and Development, C. N. R., St. Paul, Minn. Next meeting, December 5-6, 1935, Chicago, Ill.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.— Works in co-operation with the Association of American Railroads, Division IV.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 10-12, 1936, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION. — M. Fenaja, Missouri Pacific Lines Magazine, Missouri Pacific Lines Bldg., St. Louis, Mo.

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M. St. P. & P. R. R., 11402 Calumet Ave., Chicago, Ill.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.— R. E. Schindler, Union Trust Bldg., Washington, D. C. Annual meeting, beginning October 21, 1935, New Orleans, La.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.— C. E. Davies, 29 W. 39th St., New York, N. Y. Annual meeting, December 2-6, 1935. Railroad Division.—Marion B. Richardson, 192 E. Cedar St., Livingston, N. J.

AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y. Annual meeting, September 23-25, 1935, Ambassador Hotel, Atlantic City, N. J.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington, D. C. Annual meeting, January 28-30, 1936, Memphis, Tenn.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Bldg., Washington, D. C.

Operations and Maintenance Department.—J. R. Downes, Vice-President, Transportation Bldg., Washington, D. C.

Division I.—Operating.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Freight Station Section.—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y. Annual meeting, October 15-16, 1935, Hotel Kentucky, Louisville, Ky.

Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y.

Division II. — Transportation. — G. W. Covert, 59 E. Van Buren St., Chicago, Ill.

Division IV. — Engineering. — E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 10-12, 1936, Palmer House, Chicago, Ill.

Construction and Maintenance Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 10-12, 1936, Palmer House, Chicago, Ill.

Electrical Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y.

Division V.—Mechanical.—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill.

Division VI.—Purchases and Stores.—W. J. Farrell, 30 Vesey St., New York, N. Y.

Division VII.—Freight Claims.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill.

Division VIII. — Motor Transport. — George M. Campbell, Transportation Bldg., Washington, D. C.

Car-Service Division. — C. A. Buch, Transportation Bldg., Washington, D. C.

Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington, D. C.

Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Chief Clerk and Claim Agent, General Claims Dept., Alton R. R., 340 W. Harrison St., Chicago, Ill. Annual meeting, 1936, St. Paul, Minn.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS. —Jos. A. Andreucetti, C. & N. W. Ry., 1519 Daily News Bldg., 400 W. Madison St., Chicago, Ill. Annual Meeting, October 9-10, 1935, LaSalle Hotel, Chicago, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—L. F. Flanagan, Detroit Graphite Company, Room 1158, 20 N. Wacker Drive, Chicago, Ill. Meets with American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 2271 Wilson Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—A. S. Sternberg, M. C. B. Belt Ry. of Chicago, 7926 S. Morgan St., Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 2514 W 55th St., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.— J. W. Krause, Room 299, 610 S. Main St., Los Angeles, Cal. Club not active at present.

CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.— E. G. Bishop, Illinois Central R. R., East St. Louis, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO. — Mrs. M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July, and August, Hotel Statler, Buffalo, N. Y.

CINCINNATI RAILWAY CLUB.—D. R. Boyd, 2920 Utopia Place, Hyde Park, Cincinnati, Ohio. Operation suspended indefinitely.

CLEVELAND RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings temporarily suspended.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich.

INTERNATIONAL RAILWAY FUEL ASSOCIATION.— T. D. Smith, 1660 Old Colony Bldg., Chicago, Ill. Next meeting, September 18-19, 1935, Hotel Sherman, Chicago, Ill.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S As-

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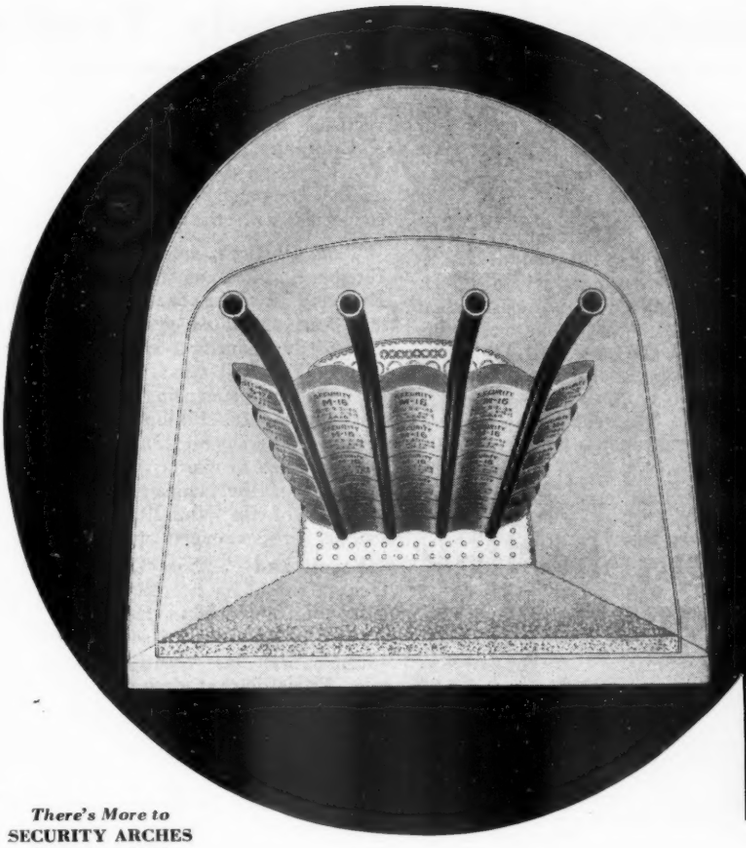

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There's More to
SECURITY ARCHES
Than Just Brick

. . . IS THE BASIS OF ALL LOCOMOTIVE ARCHES

While the fundamental Security Arch design is unchanged, locomotive progress has been revolutionized during the past ten or more years.

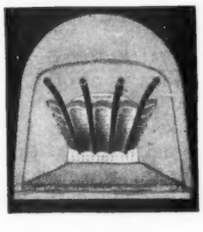
The Security Brick Arch has materially aided in this progress.

Years of experience in Brick Arch design, constant study of locomotive performance and careful, thorough research in refractory production, insure maximum fuel economy and efficiency from the Security Arch.

The Security Arch today is one of the most effective economy factors available on either new or existing power.

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED

Locomotive Combustion Specialists

SOCIATION.—Wm. Hall, 1061 W. Wabasha St., Winona, Minn. Next meeting, September 16-17, 1935, Hotel Sherman, Chicago, Ill.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y. Next meeting, September 18-19, 1935, Hotel Sherman, Chicago, Ill.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Clyde S. Bailey, 810 18th St., N. W., Washington, D. C. Annual meeting, October 15-18, 1935, Hermitage Hotel, Nashville, Tenn.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, Suite 322, 910 S. Michigan Ave., Chicago, Ill. Exhibit at A. R. E. A. Convention, March 9-12, 1936. The Coliseum, Chicago, Ill.

NATIONAL SAFETY COUNCIL.—Steam Railroad Section (see Safety Section, Association of American Railroads).

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Friday of each month, except June, July and August, 29 W. 39th St., New York, N. Y.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings, second Thursday of each month, alternately at San Francisco and Oakland, excepting July at Los Angeles and October at Sacramento.

RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—(Merged with Association of American Railroads.)

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton (Treas. and Asst. Sec.), First National Bank Bldg., Chicago, Ill. Annual meeting, November, 1935, Hotel Stevens, Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton St., Chicago, Ill. Meets with Association of Railway Electrical Engineers.

RAILWAY FIRE PROTECTIVE ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 15-16, 1935, Southern Hotel, Baltimore, Md.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division, Purchases and Stores Division, and Motor Transport Division, Association of American Railroads.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. A. R., Division I.

RAILWAY TIE ASSOCIATION.—I. C. Rowe, 2091 Railway Exchange Bldg., St. Louis, Mo.

RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, 1428 Broad Street Station Bldg., Philadelphia, Pa. Annual meeting, September 20-21, 1935. Netherland-Plaza Hotel, Cincinnati, Ohio.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual meeting, September 17-19, 1935, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. A. R., Signal Section.

SOCIETY OF OFFICERS, UNITED ASSOCIATIONS OF RAILROAD VETERANS.—M. W. Jones, Baltimore & Ohio, Mt. Royal Station, Baltimore, Md. Annual meeting, October 5-6, 1935, Hotel Sinton, Cincinnati, Ohio.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—R. G. Parks, A. B. & C. R. R., Atlanta, Ga.

TOOL FOREMEN SUPPLIERS' ASSOCIATION.—E. E. Caswell, Union Twist Drill Co., 11 S. Clinton St., Chicago, Ill. Meets with American Railway Tool Foremen's Association.

TORONTO RAILWAY CLUB.—R. H. Burgess, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, first Friday of each month, except July, August and September, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—D. J. Higgins, Gardner-Denver Company, 332 S. Michigan Ave., Chicago, Ill. Meets with Roadmasters' and Maintenance of Way Association.

TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, 1177 E. 98th St., Cleveland, Ohio. Next meeting, September 16-17, 1935, Hotel Sherman, Chicago, Ill.

WESTERN RAILWAY CLUB.—C. L. Emerson, C. M. St. P. & P., Chicago, Ill. Regular meetings, third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago, Ill.

Construction

CHESAPEAKE & OHIO.—This road is preparing plans to ask for bids to extend four stalls in its roundhouse at Charlottesville, Va., to cost about $92,100.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—The Illinois Department of Public Works and Buildings, Division of Highways, has awarded a contract to E. H. Swenson, Joliet, Ill., for the construction of the substructure of a subway under this company's tracks at Gurnee, Ill., at a cost of $49,500. A contract for the superstructure has been let to the Milwaukee Bridge Company, Milwaukee, Wis., at a cost of $36,000.

Equipment and Supplies

LOCOMOTIVES

THE MONTREAL HARBOR COMMISSION, Montreal, Canada, has ordered three switching locomotives of the 0-6-0 type from the Montreal Locomotive Works, Ltd. These locomotives will have 20 in. by 26 in. cylinders and a total weight in working order of 143,000 lb.

FREIGHT CARS

THE CHESAPEAKE & OHIO, reported in the *Railway Age* of August 3 as inquiring for 100 automobile box cars of 50 tons' capacity, equipped with loaders, has ordered this equipment from the Pullman-Standard Car Manufacturing Company.

IRON AND STEEL

THE DELAWARE & HUDSON has ordered 500 tons of steel for a bridge at Sidney, N. Y., from the American Bridge Company.

THE CENTRAL OF NEW JERSEY has ordered 325 tons of steel for a bridge at Raritan, N. J., from the Phoenix Bridge Company.

SIGNALING

THE ELECTRO-MOTIVE CORPORATION has ordered from the Union Switch & Signal Company automatic train control and cab signaling equipment of the continuous inductive type for installation on a demonstration locomotive.

MISCELLANEOUS

CHICAGO, BURLINGTON & QUINCY.—The Baldwin Locomotive Works, Philadelphia, Pa., has placed an order with The Timken Roller Bearing Company, Canton, Ohio, for bearings and boxes to equip all axles of a scale test car which it will build for the Chicago, Burlington & Quincy.

Supply Trade

Harry N. Baum has been appointed advertising manager of **Fairbanks Morse & Company,** Chicago, succeeding **W. T. Watt,** resigned to accept service with another company. Mr. Baum was formerly connected with the Dartnell publications.

T. I. Phillips, works manager at East Pittsburgh, Pa., of the **Westinghouse Electric & Manufacturing Company,** has been appointed general works manager of the company. In his new position, Mr. Phillips will serve as central authority for all manufacturing operations of the company. Mr. Phillips has been with Westinghouse since 1915, and has held various positions of executive responsibility in factories of the company, also as works manager of the Nuttall Plant and since 1933 as works manager at East Pittsburgh.

Steel and Tubes, Inc., Cleveland, Ohio, a subsidiary of the **Republic Steel Corporation,** due to increased business activity in the territory served from Philadelphia, Pa., has recently created a new sales district in that territory. It is headed by **C. J. Boyd,** formerly of the Brooklyn, N. Y., sales organization, as district manager; this district will consist of the states of North and South Carolina, Virginia, Maryland, Delaware, southern New Jersey, including Trenton; also southeastern Pennsylvania. Part of the new district was formerly included in the New York sales district and part in the Birmingham sales district. **J. F. Keeler,** of the sales promotion department in Cleveland, has been transferred to Brooklyn, to head the sales promotion work in the east; **I. H. Anderson,** of the Philadelphia office, has been transferred to Brooklyn, and **J. S. Anderson,** of the Detroit office, has been transferred to the new Philadelphia office. **J. D. Benfield** and **Robert Turrell,** formerly with the Electrical division of Steel and Tubes, Inc., have formed their own organization, known as **Turrell & Benfield, Inc.,** with headquarters at Detroit, and are representing Electrunite Steeltubes and Fretz-Moon conduit products in the Michigan territory.

Benjamin F. Fairless, who, as announced in the *Railway Age* of August 31, will head the unified **Carnegie Steel Company-Illinois Steel Company** organization, with headquarters at Pittsburgh, Pa., was born on May 3, 1890, at Pigeon Run, Ohio. He was educated at Ohio Northern University, Ada, Okla., and Wooster University, Wooster, Ohio. Mr. Fairless entered railroad service in 1912 as a transitman on the Wheeling & Lake Erie at Brewster, Ohio. In May, 1914, he became associated with the Central Steel Company, at Massillon, Ohio, and later served as its vice-president and general manager, the position he held in 1926 when that company was merged with the United Alloy Steel Corporation to form the Central Alloy Steel Corporation. Mr. Fairless was made vice-president and general manager of the new company and later its president. When the Central Alloy and other steel companies were absorbed by the Republic in 1929, Mr. Fair-

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The Engineman says—"*The way things are today, no man is running an engine who is under 50. I am 55 and at that age I want a boiler feed that is reliable and easy to operate.*"

ELESCO

ENGINEMEN are particularly favorable to the Elesco feed water heater because of the ease with which it is operated and its dependability as a boiler feeding device.

Ease of operation is, in fact, a distinct feature of the Elesco feed water heater. A turn of the valve handle starts it working; the setting of this valve determines the rate of feeding the boiler.

Operating men and shopmen all are boosters for the Elesco feed water heater. It saves them work and saves the railroad money, too.

THE SUPERHEATER COMPANY

Representative of **AMERICAN THROTTLE COMPANY, Inc.**

60 East 42nd Street
NEW YORK

Peoples Gas Building
CHICAGO

A-1005 **Canada: The Superheater Company, Limited, Montreal**

Superheaters - Feed Water Heaters - Exhaust Steam Injectors - Superheater Pyrometers - American Throttles

less became first vice-president of the new Republic organization. The plan of unification for these two United States Steel Corporation subsidiaries becomes effective

Benjamin F. Fairless

October 1, and is designed to simplify and improve procedure with respect to production and sales in the Pittsburgh-Chicago districts.

OBITUARY

B. H. Johnson, vice-president of the American Foundrymen's Association and assistant to the president of the R. D. Wood Company, Philadelphia, Pa., died at Toronto, Canada, on August 27.

S. A. Witt, western manager of the Detroit Lubricator Company at Chicago, who died on August 10, as noted in the *Railway Age* of August 24, was born in 1884 in Wisconsin. He was educated in the Chicago public schools and began his business career with the Newport Boiler

S. A. Witt

Company, Chicago. His next connection was with the American Radiator Company at Peoria, Ill., and subsequently he entered the service of Kehm Brothers, Chicago. During 1917-18, Mr. Witt served as the engineer in charge of the installation of the heating system at Camp Grant. In the latter year he became associated with the Detroit Lubricator Company as western sales manager, which position he held until his death.

Financial

BOSTON & MAINE.—*R. F. C. Loan.*—The Interstate Commerce Commission has extended to February 1, 1937, the time of payment of a loan of $7,569,437 to this company by the Reconstruction Finance Corporation, which matured September 6.

CHICAGO, BURLINGTON & QUINCY.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon part of its line from Lewistown, Ill., to West Havana,, 9.2 miles.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Trustees.*—September 24 has been set by the District Court at Chicago as the date for a hearing on the appointment of one or more trustees for this road which filed a voluntary petition for reorganization under section 77 of the amended bankruptcy act on June 29. At that time the management was permitted to remain in possession and control pending acceptance of a new plan, but under a recent amendment to the law, appointment of one more trustee is mandatory on the court.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Ask Inquiry into Reorganization Plan.*—An independent bondholders' protective committee for Chicago, Milwaukee, St. Paul & Pacific securities, composed of James D. Colyer, Louis I. Kane and Henry Schienk, has petitioned the Interstate Commerce Commission to make an inquiry into the reorganization plan of the St. Paul which has been presented to the commission. The committee drew attention to similarity of the reorganization plans of the company in 1928 and the proposed 1935 plan, and opposed the latter primarily on the basis of future control of the railroad, which, it contends virtually is in the same hands under the proposed plan as it was when the road went through its previous reorganization seven years ago. The committee questions the ability of the proposed five voting trustees, not as to motives or good faith, but as to their willingness to select directors who would act in the best interests of the security holders.

Trustees to Be Appointed.—Federal Judge Wilkerson at Chicago has set September 24 as the date for a hearing on the appointment of trustees for this company.

CHICAGO, ROCK ISLAND & PACIFIC.—*Merger with Frisco Proposed.*—The protective committee of this company's preferred stocks, headed by Carter H. Harrison, Jr., has presented to the directors a plan of reorganization calling for consolidation with the St. Louis-San Francisco.

ERIE.—*Harahan Seeks Authority to Serve as Director.*—William J. Harahan, president of the Chesapeake & Ohio, has asked the Interstate Commerce Commission for authority to hold the position of director of the Erie and 46 affiliated carriers.

MAINE CENTRAL.—*Refinancing.*—The stockholders of this company at a special meeting on August 29 unanimously approved the refinancing plan by which maturities of first and refunding mortgage bonds totaling $20,000,000 due December 1, and a note held by the Reconstruction Finance Corporation, totaling $2,449,000, and now due, will be canceled by two new issues of refunding bonds. The new issues are $13,949,000 first mortgage and collateral bonds to bear interest at 4 per cent per year, and maturing in 10 years, and $11,500,000 general mortgage bonds, bearing interest at 4½ per cent to mature in 25 years. Under the plan of exchange, the holders of the maturing present first mortgage bonds and the present 6 per cent collateral trust bonds will be entitled to receive 50 per cent in the new first mortgage 4 per cent bonds, and 50 per cent in general mortgage 4½ per cent bonds; or, at the option of the bondholders, to receive cash in lieu of the short term bonds. The cash for payment of those bondholders who elect to take cash will be advanced to the company by the R. F. C., on a 4 per cent collateral note, payable in nine years, with the option of earlier payment on any interest date, and will be secured by an equal face amount of the new first mortgage bonds. Additional funds will be advanced by the Reconstruction Finance Corporation on the same basis to enable the company to meet at maturity a note which the R. F. C. now holds and the collateral which is held as security for that note will be surrendered to the company.

To Purchase Leased Line.—President E. S. French, who presided at the meeting, also announced that the directors had decided in connection with the plan that it was advisable to purchase the Eastern Maine R. R., which is a part of the line between Bangor and Calais, now under lease to the Maine Central Railroad. The stockholders voted unanimously to approve this purchase at a price of $125,000.

MISSOURI PACIFIC.—*Objection to Reorganization Plan.*—A petition has been presented to the Interstate Commerce Commission by a group of holders of first mortgage bonds of the New Orleans, Texas & Mexico alleging that the plan for the reorganization of the Missouri Pacific proposes to deal "unfairly, inequitably and illegally" with their interests. Permission to intervene in the reorganization hearings was sought and was authorized by the Interstate Commerce Commission.

Average Prices of Stocks and of Bonds

	Sept. 3	Last week	Last year
Average price of 20 representative railway stocks..	35.89	35.52	35.48
Average price of 20 representative railway bonds..	73.92	74.11	73.33

Dividends Declared

Chesapeake & Ohio.—Common, 70¢, quarterly, payable October 1 to holders of record September 6.

Lackawanna R. R. of New Jersey.—Guaranteed, $1.00, quarterly, payable October 1 to holders of record September 6.

New York, Lackawanna & Western.—5 Per Cent Guaranteed, $1.25, quarterly, payable October 1 to holders of record September 13.

Newark & Bloomfield.—$1.50, semi-annually, payable October 1 to holders of record September 20.

Norwich & Westchester.—8 Per Cent Preferred, $2.00, quarterly, payable October 1 to holders of record September 12.

Pittsburgh, Bessemer & Lake Erie.—75¢, semi-annually, payable October 1 to holders of record September 14.

Portland & Ogdensburg.—50¢, quarterly, payable August 31 to holders of record August 20.

Continued on next left-hand page

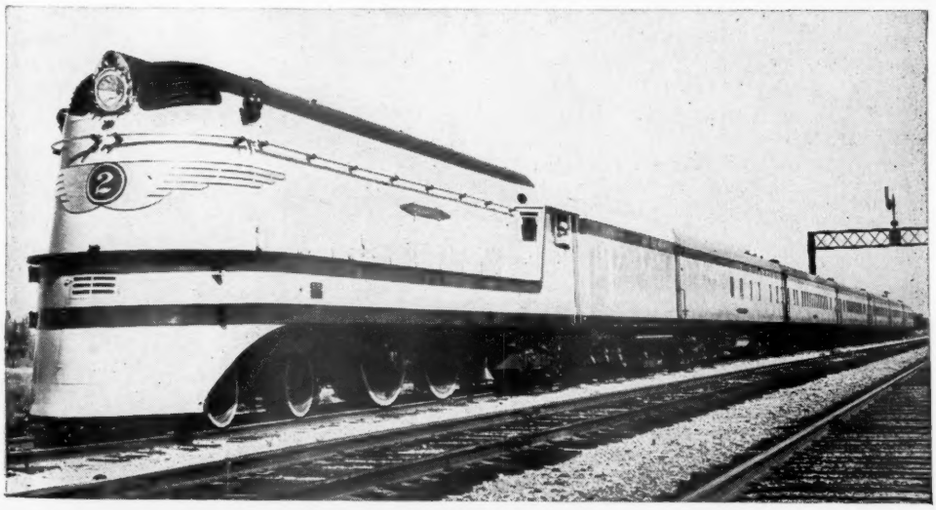
FLEXIBILITY

GOOD railroading calls for safe, uninterrupted, punctual service through all kinds of weather. The lack of restriction in horsepower available in the steam locomotive allows a power unit to be built to maintain schedules under adverse conditions. This means a certain surplus of power under favorable conditions, allowing more cars to be attached to the train if the demand arises.

The "HIAWATHA" was built to induce the traveling public again to patronize the railroad. It was guaranteed to handle six cars on a very exacting schedule. The traveling public reacted so favorably that in a short time the train was increased to seven cars. Then an extra stop was added to the schedule. Lately, an eighth car has had to be added to the train. And in the meantime, the same original exacting schedule is still being regularly maintained.

As we have ever understood it, this flexibility always has been a positive requirement of good railroading.

AMERICAN LOCOMOTIVE COMPANY



30 CHURCH STREET · NEW YORK · N·Y·

ALCO

Railway Officers

TRAFFIC

B. L. Gartside, city passenger agent at Chicago for the Chicago, Burlington & Quincy, has been appointed general agent, passenger department, with headquarters at Kansas City, Mo., to succeed **Herbert S. Jones,** who has retired, effective September 1.

William C. Downing, general agent for the Pennsylvania at Indianapolis, Ind., and formerly general superintendent of various points on this system, retired from active service on September 1, after more than 50 years service with the Pennsylvania. Mr. Downing was born on August 21, 1865, at Richmond, Ind. He first entered railway service in April, 1885, as a rodman with the Chicago, St. Louis & Pittsburgh (now part of the Pennsylvania). He then served successively as a transitman, acting assistant engineer, masonry inspector and assistant engineer, holding the latter position until May 1, 1891, when he was appointed engineer maintenance of way of the Richmond division. In January, 1895, Mr. Downing was appointed engineer maintenance of way of the Vandalia (now also part of the Pennsylvania), being appointed superintendent of the Peoria division of this road in 1901. In the following year he was transferred to the St. Louis division, and on November 1, 1912, he was made superintendent of the Pittsburgh division of the Pennsylvania. Two years later he was advanced to general superintendent, with headquarters at Toledo, Ohio, being transferred to Pittsburgh, Pa., in the following year, and thence to Indianapolis in 1920. In 1926, Mr. Downing was made general agent and superintendent at Indianapolis and since March 10, 1927, he has held the position of general agent at that point.

MECHANICAL

E. J. Hausbach, general foreman of the Decatur, Ill., locomotive shop of the Wabash, has been promoted to shop superintendent, succeeding **H. C. Caswell,** deceased.

Wesley B. Berry, master mechanic of the St. Louis-San Francisco, with headquarters at Kansas City, Mo., has been appointed assistant superintendent motive power, with headquarters at Springfield, Mo.

SPECIAL

E. E. McGuire has been appointed director, accident prevention, of the St. Louis-San Francisco, with headquarters at Springfield, Mo., succeeding **C. H. Baltzell,** who has retired.

OBITUARY

Fred B. McCutchon, who retired in 1909 as chief engineer of the Gulf & Ship Island (now part of the Illinois Central), died at his home in Pass Christian, Miss., on July 30, at the age of 82 years.

George E. Francisco, local treasurer of the Wabash, with headquarters at St. Louis, Mo., died on August 19 at Tenafly, N. J., following an operation.

J. Edwin Williams, who retired in 1916 as purchasing agent of the Terminal Railroad Association of St. Louis, died in Clifton Springs, N. Y., on August 7, at the age of 87 years.

George G. Derby, superintendent of the Middle division of the Atchison, Topeka & Santa Fe, with headquarters at Newton, Kan., died in a hotel at Denver, Colo., on August 24. Mr. Derby was born on January 3, 1875, in Crawford County, Pa. He was educated at Allegheny college, from which he was graduated in 1895. Mr. Derby entered railway service in 1889, serving as a warehouseman and clerk on the New York, Lake Erie & Western (now the Erie), during vacations from school. Following his graduation in 1895, he entered the service of the Erie, holding various positions in office, train and yard service until August, 1906, when he went with the Santa Fe as assistant yardmaster at La Junta, Colo. Later in the same year he was transferred to Albuquerque, N. M., and in April, 1907, he was appointed general yardmaster at La Junta. In November, 1909, Mr. Derby was promoted to assistant trainmaster at Newton, where he was further advanced to trainmaster in November, 1910. In October, 1916, he was promoted to superintendent of the Oklahoma division at Arkansas City, Kan., being transferred to the Southern Kansas division, with headquarters at Chanute, Kan., two years later. In November, 1928, Mr. Derby was transferred to Newton, where he was located at the time of his death.

Edwin M. Rine, who retired as vice-president and general manager of the Delaware, Lackawanna & Western in December, 1933, died at his home in Montclair, N. J., on September 4 after an illness of several months. Mr. Rine was born on September 4, 1867. He entered railway service in 1886 as telegraph operator for the Pennsylvania, subsequently serving in the same position on the Pittsburgh & Western (now a part of the B. & O.) at Allegheny, Pa. From 1889 until 1890, he served as train dispatcher for the same road, then serving consecutively for short periods in the same position on the South Carolina R. R. (now part of the Southern) at Charleston, S. C., and on the Cleveland Terminal & Valley R. R. (part of the B. & O.), at Cleveland, Ohio. From 1892 to 1895, Mr. Rine was chief dispatcher of the latter road, and from 1894 until October 1899, he was also chief dispatcher of the Akron division of the Baltimore & Ohio. From 1895 to October, 1899, he also served as trainmaster of the same division of the latter road and as chief dispatcher for the Cleveland Terminal & Valley. Mr. Rine entered the service of the Lackawanna in October, 1899, as train dispatcher at Scranton, Pa., and in December of that year he was promoted to the position of trainmaster. From August until December, 1900, he was acting division superintendent for the same road and on the latter date he was appointed superintendent of the Scranton division. In 1908 he was appointed superintendent of the Morris &

Edwin M. Rine

Essex division and in 1910 he became assistant general superintendent. He was promoted to the position of general superintendent in January, 1912. Mr. Rine was appointed vice-president and general manager of the Lackawanna in March, 1917, and served in that position until his retirement on January 1, 1934.

Col. R. F. White, general counsel of the Louisiana & Arkansas, who died at Shreveport, La., on August 18, as reported in the *Railway Age* of August 31, was born at Alexandria, La., on November 2, 1888, and obtained his legal education at George Washington University (LL.B); Webb School, Bell Buckle, Tenn.; and Tulane University, New Orleans. Col. White was admitted to the Louisiana Bar in 1912. In April, 1917, he enlisted as a private, First Louisiana Infantry, National Guard, and was discharged as a lieutenant colonel in December, 1918. He was president of the Louisiana Bar Association in

Col. R. F. White

1928-29 and was a member of the Louisiana Supreme Court Bar Examining Committee. For many years Col. White was a member of the firm of White, Holloman & White at Alexandria. In 1931 he became general counsel of the Louisiana & Arkansas, with headquarters at Shreveport, La.